

Developed by Paris-based software house Cryo, *Mega Race* on 3DO shows that the Europeans have the design flair to match their US counterparts. Edge examines *Mega Race* and Cryo's stunning new titles *Saurus* and *Dragontales*...

EDGE



A month in videogaming is a bloody long time...

This month saw the launch of Atari's Jaguar – the world's first 64bit console.

The same month that Sony announced it is to enter the videogame hardware market with its own CD-based 3D graphics machine.

The same month that saw the launch of Philips' Digital Video cartridge, making CD-i a real videogame contender.

And only a month after the launch of Panasonic's 3DO and Commodore's CD^{32}.

Technophiles have never had it so good: all this wonderful new hardware and games to play with. But there's a real danger in this prolification of machines. Who will the big winners be?

It certainly won't be the consumers: desirous of the new technology, afraid of being behind-the-times and cornered by the marketing, they have no option but to succumb to the new state-of-the-art.

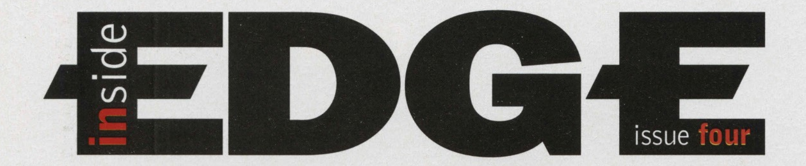
But multi-format means non-standard means consumer confusion, small user-bases, splintered markets, high prices, and the Damoclesean threat of obsolescence.

And that's without counting up-and-coming hardware like NEC's 32bit CD system, Sega's 32bit Saturn and Nintendo's 64bit Project Reality.

If hardware is made to sell software, there should be no problem. Videos play films; consoles play games. But Trip Hawkins' dream of a VHS-style multimedia standard looks as far away as ever.

And until some standardisation occurs, you can bet that the only one who's going to lose is you.

The **future** is almost here...



Contacts

Editorial
Future Publishing
30 Monmouth Street
Bath BA1 2BW
Telephone 0225 442244
Fax 0225 446019

Subscriptions
Future Publishing
Cary Court, Somerton
Somerset TA11 7BR
Telephone 0458 74011
Fax 0458 74378

People on Edge
Steve Jarratt editor
Matthew Williams art editor
Rob Abbott deputy art editor
Harry Wylie production editor
Jason Brookes writer
George Andreas writer

Stuart Menges Konix story

Simon Moss advertising manager
Jonathan Bint group advertising manager
Richard Gingell production manager
Cathy McKinnon ad design
Claire Thomas production controller
Judith Middleton group production manager
Simon Windsor colour scanning
Simon Chittenden mono scanning
Jon Moore lino/scanning coordinator
Mark Glover lino operative
Tamara Ward promotions assistant
Steve Carey publisher
Greg Ingham group publishing director/joint managing director
Chris Anderson chairman

Reproduction
Avon Scanning and Planning, Bristol

Print
Cradley Print
Warley, West Midlands
Edge is printed on Royal Press 90 gsm

Typography (Adobe®)
ITC Franklin Gothic/**Heavy**
Gill Sans/**Bold**
Bell Gothic light/**Black**

At the time of going to press, rumour suggested that the Chancellor was intending to impose Value Added Tax on magazines at the full whack of 17.5%, beginning soon.

This will cause the closure of lots of magazines (though not this one, we're glad to say), job losses, and increased coverprices on most if not all mags.

If there's still time, we'd urge you to write to The Right Hon Kenneth Clarke MP at the House of Commons, Westminster, London SW1A 1AA and complain. If, however, things have moved on since then, we'd urge you to subscribe immediately (see page 90). That way, not only do you get your magazine delivered to your door, you also manage to avoid paying VAT, too!



Printed in the UK
All of it © **Future Publishing** 1994

insideview



18

Prescreen

Edge profiles some of the best videogames in development around the world, including stunning new titles from Cryo; *Saurus* (above), *MegaRace*, and *Dragontales*, plus Jaguar newies: *Aliens Vs Predator* and *Chequered Flag II*



57

Testscreen

A review-packed Testscreen section this month, including a stunning four pages on Attention To Detail's *Cybermorph*, the first finished game for Atari's Jaguar. Plus one of our highest rated SNES games ever, *Secret Of Mana*, and in-depth reviews of the latest for CD-i, PC Engine, Mac, PC and Mega Drive



84

Jon Waldern

Virtual Reality, as we all know, is more than just a buzzword: it's soon to be the biggest growth area in the videogames market. **Edge** meets the UK's own Virtual Reality pioneer, Dr Jon Waldern, and asks him about what his latest deal to build Sega Virtual Reality games will mean for the videogames consumer

Sony enter the videogame arena, **page 6...** Philips' **Digital Video** cartridge goes on sale, **page 8...** Atari **Jaguar** launches in New York, **page 9... 3D** steals the show at **A**ssociated **L**eisure **P**review '94 **page 10... Alien War** begins in London, **page 14...**



The very latest **news** from across the entire world of videogaming

Sony multimedia machine for '94

With Hollywood and the music industry firmly in its grasp, Japanese electronics giant Sony is now casting its steely eye over the games market...



With experience in TV, video, CD and Minidisc audio, LaserDisc, CD-i and electronic multimedia, Sony are well placed to enter the videogame market – and take it over

After years of speculation and one or two false starts, Sony has announced that it is to enter the interactive entertainment hardware market in the latter half of next year.

The global electronics giant will launch a CD console into the Japanese market in late 1994 with a European launch pencilled in for mid-1995. It is being developed by a newly formed subsidiary called Sony Computer Entertainment (SCE), which will also be developing software for the format as well as licensing the technology to third party developers.

Already the new machine is being thought of internally as 'one of the most significant hardware launches of the decade'.

In its official announcement, Sony commented: 'The next generation games machine is expected to offer high speed, simultaneous movement of characters and high quality backgrounds together with powerful three-dimensional computer graphics.

'In order to achieve such high quality images, the hardware must generate images →

Project Un-Reality?

Rumour has it that Silicon Graphics have already pulled out of Nintendo's vapourous next generation home system.

Dubbed 'Project Reality', the much vaunted 64bit graphics engine was to be a joint hardware venture between Nintendo and 3D graphics specialists SGI.

A 3D coin-op is still in the pipeline, employing 3D hardware developed by SGI, but the home system has hit problems.

It appears Nintendo were a little premature in declaring the tie-up and SGI have since decided that it conflicts with their core business.

A major re-think of Nintendo's next step is currently under way, although rumours suggest a more realistic cartridge based 32bit system has started development.

Edge reckons Nintendo should give Atari a call and solve everybody's problems.

Konix from the ashes...

From the ashes of the Konix Multisystem has arisen an exciting new CD-based machine offering impressive technical specifications.

The new console is being developed by Konix engineers MSU in conjunction with TXC corporation, a large Taiwanese company.

Scheduled for launch at the Las Vegas CES, the TXE Multisystem console is said to resemble a domestic CD player, but slightly larger and with a double-speed CD drive.



The Konix Multisystem: innovative, original... and totally doomed

At the heart of the system is an 80X86 processor – probably an 80386SX clocked at 25MHz – with two further processors sharing the workload, plus a custom CD interface.

The first chip is a Blitter, which performs graphic manipulations and animation effects.

The second is a Texas Instruments DSP, which is used to produce 16bit CD-quality stereo sound. However it can also be used for graphics processing, such as 3D rotation routines. An arithmetic logic unit in the DSP can multiply two 16bit numbers to produce a 32bit result in two cycles; a 68000 takes 70 cycles to do the same.

Little is known about third party developers, but the first titles are said to include *F16*, *Team Suzuki*, *Detox*, *Lotus Challenge* and *Robocod*.



Sony's portable CD-i unit: a token nod towards the standard, and another step nearer their own CD machine

← in real time and the images must respond instantly to commands from the controls.'

It is rumoured that the machine will offer the same level of performance as high-end graphics workstations.

A Sony insider told **Edge**: 'It's more powerful than any machine on the market or in development by a huge margin.'

The feeling in the games market is that whatever Sony is doing has got to be a serious contender. The company has a current turnover of $34,421,707,000, which converts into sterling at over £20 billion. If the firm decided to to throw its weight behind the machine (which it seems certain to do if it regards it as one of its most important launches of the '90s) it could more or less buy the games market.

But **Edge** understands that the new format is being aimed at far broader applications than just gameplaying. As well as the ability to play audio CDs, the capacity to play Digital Video movies from CD is almost certainly being built into the unit.

Sony already own a vast multimedia empire incorporating Columbia Tri-Star Studios and CBS records. More recently it decided to become a fully fledged games publisher, initiating the Sony Imagesoft label and acquiring software houses like Psygnosis.

A well-placed Sony source explained: 'This is the culmination of many years and billions of dollars of investment. The new machine is just the logical conclusion of acquisitions like Columbia and CBS.'

It seems, then, that whilst the initial announcement has concentrated on the videogaming capabilities of the format, Sony is eyeing the sort of market that 3DO is currently trying to define rather than the one dominated by Nintendo and Sega.

What it may be trying to do, in fact, is wrap the game, audio and video markets up in one machine. And as a Sony insider commented: '3DO's dream of using film studios and record labels to create the ideal multimedia world is wonderful, but a little difficult logistically when you're trying to pull so many different companies together. If you own the movie studios and the record labels, it becomes much more of a reality.'

The new CD console under development at Sony is not the first games machine built by the firm.

A few years ago it entered into an agreement with Nintendo to make a machine called the Playstation. The idea was that the Playstation would run SNES carts plus a new format, SNES CD. It would be Sony branded while Nintendo would produce a standalone SNES CD drive (like the Mega CD) under its own name. The two products were to be totally compatible.

Neither project ever saw the light of day. It seems that Nintendo got cold feet about CDs and Sony saw no point in launching its Playstation in isolation.

There would certainly have been an outcry from existing SNES owners if they had been asked to pay for the machine they already owned all over again to get their hands on CD technology. A separate drive from Nintendo was crucial to the whole plan.

But the Playstation was built and did get beyond the prototype stage. Apparently 200 finished units are gathering dust in Sony offices around the world.

A source within the firm told **Edge** that Sony also completed one CD title for the machine which was 'absolutely awesome'.

Although the project was scrapped and will never reach the market, the firm is insistent that the Playstation was not a waste of time or money. Many engineers that developed the machine are central to the development of the new console and the Playstation experience, one source claimed, 'proved invaluable'.

With 3DO, Jaguar, Nintendo, Sega, NEC and now Sony all vying for a slice of the market, 1994 could be a very interesting – and expensive – year.



An artist's impression of Sony's aborted Playstation. Whatever their new machine, you can bet it'll be matt black with high build quality

When is it?

It's the year Nintendo launched their new, next generation machine, promising to deliver an add-on mass storage medium with the capacity for amazing new tites. Gamers went wild and held their breath in anticipation...

Continued next page

head to head

'[The Jaguar's tech-spec] is terrific, the best I've seen… If Nintendo said they'd be launching this at around £200, we'd be jumping through hoops and shouting it from the rooftops.'

Gary Bracey, Software development director, Ocean Software

'[The Jaguar] is either an over-specced cartridge machine or an under-specced CD machine. If you're going to launch a CD machine you must be committed to the format and make it CD from day one.'

Ian Heatherington, MD Psygnosis

it is…

1990. Nintendo's new Super Famicom appears and the gaming world begins the long wait for the Super CD-ROM. Three years on and Nintendo have dropped the idea of CDs, while confusion reigns over their 32/64bit machine

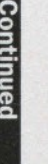
CD-i gets Digital Video

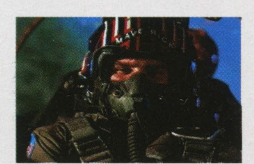
The age of Digital Video is upon us. Philips' FMV cartridge and the first batch of DV movies are now on sale. Edge examines the new medium



Photograph: **Peter Canning**

This unlikely looking block of metal and silicon enables CD-i machines to play films and FMV games directly from CD. Could it signal the end for VHS and LaserDiscs?









The first run of DV demos feature one disc of the movie Top Gun. Generally the image quality is good (top), but fast moving or busy images (middle, bottom) suffer severe blocking and break up. Philips assure us that hasty encoding is to blame and that the finished article is of a much higher quality. Honest

Philips' DV cartridge – which many see as the saviour of the system – is now on sale. The 2.5 Mb cartridge incorporates a RISC chipset that decompresses CD data to the MPEG 1 standard, allowing any CD-i player to display full-motion video from CD.

Initially, this means movies on two or three CDs, music videos, videogames and educational titles incorporating full-motion video and, later, interactive movies.

A licensing deal between Philips and Paramount means that the first batch of DV titles includes Top Gun, Naked Gun 2½, Indecent Proposal, Beverley Hills Cop, Hunt For Red October, Patriot Games and Star Trek VI – all Paramount titles.

A new Star Trek movie is also in development, but this time the viewer can interact with the cast, changing the plotline and influencing the film's ending.

At just £15.99 for a two-CD pack, the DV movies represent pretty good value for money, but are they any good?

There's still some debate over the picture quality of Digital Video. MPEG compression works by storing key frames in their entirety, and then by storing the difference between a key frame and subsequent frames. So, the picture quality depends upon the how the image changes during a sequence.

On the demo discs **Edge** has encountered, this has varied from a subtle 'heat-haze' around objects to an annoying mosaic effect, where the entire screen is broken up into blocks. Philips maintain that these problems can be overcome by careful encoding and that the movies on sale are of superior quality. And if they want to beat VHS, they'd better be… E

Jaguar launch delayed

Atari recently celebrated the (impending) launch of the Jaguar in New York. Edge was there and lived to tell the tale



Sam (left) and Jack Tramiel pose among the greenery and girls while Skylar from *Cybermorph* (see p58) clutches on tightly to an empty Jaguar box...

To celebrate the launch of their new machine – and to persuade magazines that the Jaguar is actually worth talking about – Atari held a launch party in New York at the beginning of November, and flew a group of 11 European journalists over there. **Edge**, obviously, was invited to attend.

The launch itself was a good do: lots of freely flowing wine, girls attired in velvet catsuits crawling around the floor pawing at attendee's legs, and a speech from Atari President, **Sam Tramiel**. Sam assured the assembled crowds that Atari are going to back the machine by overcoming their usual aversion to marketing and actually advertising the thing.

All were all suitably impressed despite not being able to see any of the promised dignitaries (like the mayor of New York) and the fact that the games expected to be ready by the release date had diminished from five to four – *Crescent Galaxy*, *Raiden*, *Evolution Dino Dudes* and *Cybermorph*, which comes bundled with the machine.

Edge played on the display Jaguars and then tried to persuade Atari to sell us one of the boxed machines. We were there, cash in hand, ready to pay. But was there a Jaguar to be had? Was there hell. New York and San Francisco would have to wait just a while longer for their shipment...

However, all is not bad news for Atari. Three more top licencees have added their backing to the project: Gremlin Graphics, Microprose and 21st Century Entertainment.

Gremlin already have *Zool 2* in production for Jaguar with other games under consideration; Microprose will be using the polygon capabilities of the machine to convert some of their simulation software; and 21st Century will no doubt do a 64bit, 16.7 million colour pinball game.

More delays notwithstanding, some 10,000 units will be available in the UK from November 22, onsale at HMV, Virgin and Harrods. Start queueing...

On release this month

14 Mega Drive games reviewed in: **MEGA**

Highest rated: **Toejam & Earl 2** 92%
Lowest rated: **Dashin' Desperadoes** 45%

27 PC games reviewed in:



Highest rated: **Shadowcaster** 87%
Lowest rated: **Top Gun Danger Zone** 37%

18 SNES games reviewed in:



Highest rated: **Super Bomberman** 92%
Lowest rated: **Dr Franken** 55%

22 Amiga games reviewed in:



Highest rated: **Cannon Fodder** 94%
Lowest rated: **Prime Mover** 22%

Neo Geo CD ROM for '94

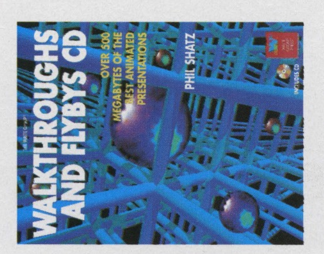
SNK is finally committing itself to launching CD-ROM hardware for its Neo-Geo arcade and home platform. It's expected that the system, which includes 7Mb of DRAM – the largest memory of any home CD system – will be launched worldwide in June 1994, starting in the arcades. A price for the hardware hasn't yet been set, but president, Eikichi Kawasaki, suggested that software pricing would undercut current console software prices in Japan. 180 meg games will apparently cost between ¥7,000-8,000 (£40-50). More news soon...

BUZZ words

Full-Motion Video

cor **FMV** is amazing because it's like watching telly right but with **FMV** the scenery's all computer generated like in the smarties' ad and the game is like laid over the top so the **FMV** background is great but it's got cack sprites and it's not really interactive come to think of it **FMV** is like dragon's lair and who wants to play that when you can be watching telly instead...

Continued next page



Essential reading

Walkthroughs & Flybys is a fascinating collection of high-end graphics demos on PC CD-ROM. 540Mb of pure rendered graphic loveliness, to be precise. It all comes with a handbook written by US graphic artist **Phil Shatz**, and includes more than a few creations from Autodesk's workhorse graphics package, *3D Studio*.

Other demos include SoundBlaster samples, and pieces from Domark's Virtual Reality Toolkit. One slight warning – some of the demos are very disk-hungry, and unless you've got SVGA graphics, you'll miss most of the best stuff. This aside, if you love modern high-tech graphics, this collection is a must. Contact: Computer Manuals, tel: (021) 706 6000

3D coin-ops lead at ALP show

Continued

The recent UK coin-op show in London was the first chance for British arcade owners to see games like Sega's *Virtua Fighting*, Capcom's *Super SF II*, and Namco's utterly stunning *Super Sled*. Edge was in attendance...



Photography: Rob Scott

The Brent Leisure stand had few games, but Namco's two biggies more than made up for it. *Air Combat* kept players enthralled with its great visuals and intricate gameplay

Associated Leisure recently held their annual arcade preview show at the Novotel Hotel in Hammersmith. It was a chance for the British trade to have their first look at games like Sega's *Virtua Fighting*, Capcom's *Super Street Fighter II* and Namco's utterly stunning *Cyber Sled*.

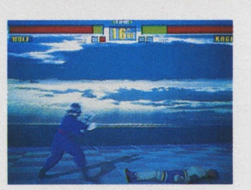
The Electrocoin stand understandably attracted a lot of interest. Taito's latest twoplayer driving game, *Ground Effects*, made its debut but had a hard time interesting people. That's not to say that *Ground Effects* was a bad game – far from it, in fact it was great. It was just that a certain Capcom game was casting a formidable shadow over Taito's effort: their four tournament-prepared *Super Street Fighter II* machines, to be precise.

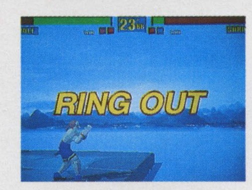
Capcom staff fighter **Isaac Philip** was there, willing and most definitely able to challenge any visitors brave enough to take him on. As reported in **Edge** two, *Super Street Fighter II* has dropped in speed.

Isaac explained, 'I really was surprised to see that the game has come down in speed. I'm used to the Turbo edition, but this →









***Street Fighter II*, for once, was not the most popular beat 'em up at the show. *Virtua Fighting* took that honour – the most explosive, realistic and fun to play one-on-one beat 'em up ever**

Attract mode

This is a regular Edge spot where we get all excited about one of the best ingame intros of the month. This month we've got *Dracula X: Devil's Castle* for the PC Engine CD ROM. Surprised? Well turn to page 48 and you'll see that there's still a lot of life in the old PC Engine. And *Dracula X* gets the Testscreen treatment on page 72. Meanwhile just sit back and enjoy the intro...



1 **Nice, gloomy, evil scene-setting stuff to start of with. Lightning strikes behind a church, the bell tolls, and a German (?) voice describes in detail how the town is being persecuted by Count Dracula**



2 **A sacrificial virgin lies asleep on a stone slab inside the church, awaiting a grisly death. Count Dracula's armoured henchmen surround her naked and vulnerable body, cloaked in a white sheet. The seconds tick by until the command is given...**



3 **A broad sword swiftly slices through her heart and (naturally, one would assume) she lets out a piercing scream as a torrent of blood spurts out of the wound. It's only a matter of time before word gets around who the victim really was**







Namco's *Cyber Sled* may look impressive in these screenshots, but it's one of those games that can't be appreciated until you've actually played it. The twoplayer option must be one of the best ever



Deith Leisure displayed some of the latest American Laser Games. *Mad God McCree 2* was a slight improvement over the original, but *Crime Patrol* was far superior to both

Who is it?

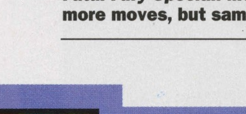
This small software team provided the first demos for a revolutionary new console and also helped in de-bugging the chipset. Prior to the machine going onsale, they completed one game and had another in the pipeline...

← version has far more variety and more skill is required to finish the game. There's also a lot more to it, lots of hidden things.'

Isaac wouldn't disclose what 'hidden' features the game had but hinted at the possibility of surprise endings, and apparently Zangief has more than his fair share of fighting tricks.

Taking centre stage on the Brent Leisure stand was without doubt one of the most talked about games of the whole show – Namco's *Cyber Sled*. Remember that 'tank' game in *Combat* on the old Atari VCS? Well, imagine you're being thrust towards one of the playfields in that game at 100mph only to land slightly behind your tank, then imagine that the world you're now in is made up of ultra-smooth 3D polygons. Add to that some rather special extra weapons, a thumping rock base soundtrack and a simultaneous twoplayer option, and you'll have some idea as to what all the fuss at the show was about.





***Fatal Fury Special*: more characters, more moves, but same old gameplay...**

After choosing a 'sled' from a selection of six, you're then literally dropped into one of six fields of play. Using the terrain to roam around, you have to make your way towards your opponent – using *Battlezone*-type controllers – with the object being to blast your opponent to bits. Graphically *Cyber Sled* is great, with some stages even shrouded in mist and darkness – full use of your radar is essential for survival here.

Namco's other game, *Air Combat*, lacked the immediate punch of *Cyber Sled* even though it used similarly structured graphics and game design. However, if its →

Continued next page

4 **Peter, a budding vampire hunter, confronts his grief as the wooden coffin containing his murdered girlfriend is lowered into the freezing ground. Revenge for the death of his love is the only thing he can contemplate at this moment in time**



5 **Preparing for an assault led by the avenging vampire hunter, Dracula summons some help. The hijacked souls of Dracula's victims rise from the ground in the graveyard one night, and the undead storm the streets in droves**



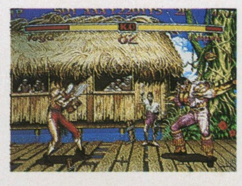
6 **To be honest we haven't a clue who this is. Only that her name's Maria and she gets kidnapped by Dracula and held as bait for the eager young hunter. In the inner sanctum of Dracula's castle, a beam of light suspends her from the ground**

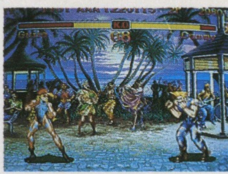


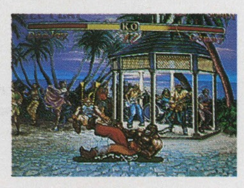
7 **And all that's left is a few gratuitous close up shots of the handsome, brave hero as he ponders the sinister events that await him. Now, check list: garlic, wooden stakes, holy water and something to hit him with. A whip should do the trick. Game on...**



Although *Alien³ – The Gun* had to share a stand with *Virtua Fighting*, it still managed to entice players to grapple with its guns. Great Alien-style backgrounds and sprites







The game many people thought would steal the show, *Super Street Fighter 2*, didn't. It still managed to pull in the crowds and the staff fighters made having a go on the machine all the more challenging

it is...

Attention To Detail. The console was the Konix Multisystem and the game, *The Last Ninja 2*. ATD also helped de-bug the Jaguar and coded *Cybermorph* which is the launch title. Let's hope their efforts are better rewarded this time...

Continued

immediate impact was in question, its lasting appeal certainly wasn't. After perseverance, it proved to be a more involving game than *Cyber Sled*: the aerial dog fights had particular appeal.

Although *Super Street Fighter II* was popular, it was Sega's other fighting effort – *Virtua Fighting* – that won over most beat 'em up fans. And ranking alongside *Cyber Sled* in the 'wow' department, Deith Leisure proudly showed it off.

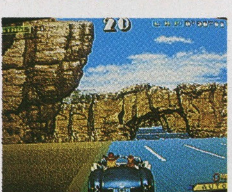
Sega hope to have the machine in the arcades by the time you read this, but as they're reputed to cost £14,000 each, don't expect to see one in your 'local' arcade. Using the same engine that's in Sega's *Virtua Racing*, it allows the use of some impressive 'camera' angles and smooth polygon routines.

Virtua Fighting contains some of the most explosive and impressive fighting action yet seen in any videogame. Although the game lacks the depth of *Street Fighter*, aesthetically at least, it's far, far superior.

After choosing your fighter from the 12 on offer, you're placed inside a fighting ring. The backdrops are very simple and dull, but it's what goes on inside the ring that really catches the eye. You can win a bout by one of two methods: sending your opponent to sleep with a barrage of concussive blows, or even more impressive, sending your opponent flying out of the ring with a chillingly accurate attack.

The sound effects can only be described as crunching. In fact they're so realistic, onlookers could be seen wincing throughout a bout. Using two attack buttons and one →







***Outrunners* debuted for the first time in Britain. With a choice of eight cars and 30 locations, it proved good fun. But compared with Sega's other games, it's already looking dated**



The game people came from miles to see – *Ridge Racer* – wasn't even at the show. It was a mystery that even the Namco representatives wouldn't comment on...



Using an ultra-fast 3D road routine, Taito's twoplayer racing game, *Ground Effects*, was by far the best driving game at the show

← block button, the game – although fun – did seem a little limited. Still, when this eventually does appear, you'll find those alluring visuals hard to resist.

Alien³ - The Gun, was also displayed on the Deith Leisure stand. Another in a long line of *Operation Wolf* variants, this one is probably the best of the lot. Twoplayer action and some astounding graphics ensured this was a success.

Although the show was quite a success, it wasn't without its disappointments. Probably the biggest disappointment was the mysterious absence of Namco's real biggie: *Ridge Racer*. Still, there was enough there to please most of those who attended, and it proved to be a perfect prelude to the ATEI show – the really big event in the arcade calender – due to take place at Earls Court at the end of January.

i wish...

Ian Stewart

'...that the whole world spoke the same language. When I think back to my school days, I remember sitting in French and German classes, not really taking any notice of what was being said to me. I must have wasted hours when I could have been really studying. Just think of the time we could all save if everyone spoke the same language.

But how would this affect the games market? Well, I dare not begin to think how much money I've wasted hanging on the telephone to Japan and various other countries trying to get hold of the person I need to speak to. I've tried speaking Japanese, and I can assure you that it's not easy. In the past, I've spent up to 15 minutes trying to get in touch with the right person and then given up.

Also, can you imagine what it's like to sit around a table with ten Japanese people, trying to strike a deal for *Zool* with the ten Japanese guys all speaking Japanese to each other, and one guy reporting back what they've all said.

Another area in which it affects us is the instruction manual – which is sometimes printed in five different languages. If we spoke the same language, think how many trees we would save. All in all I think that if the whole world spoke the same language, we'd all get on a lot better...'

Ian Stewart is Managing Director of **Gremlin Graphics**, the company behind *Zool*, *Top Racer*, *Litil Divil*, *Lotus Turbo Challenge*, and others.

Over the wire

A regular spot where Edge reports on how technology will shape the news of the not-too-distant future...

...Reuters Newsline, 15:33, 10/2/99 via NJ SatLink

In Thorpseville Louisiana today, doctors and programmers were fighting to save not the body, but the mind of 17-year-old Sandy Voigt, who was critically injured in a traffic accident three months ago.

Voigt's injuries are so extensive that doctors are predicting a minimum 73% tissue loss. If Voigt were to survive, he would be limbless, massively traumatised and unable to survive outside the laboratory. State-of-the-art surgical and bioMech techniques have maintained rudimentary digestive and circulatory functions, but doctors are more concerned about Voigt's state of mind.

"No patient has ever experienced this degree of injury and tissue loss before. In our judgement, the psychodynamic shock on discovering his injuries would kill Mr. Voigt." - Surgeon General Alex vanDerMann, Thorpseville Medicenter.

In an effort to prevent this discovery, doctors are using a hastily-adapted VR system to "sidestep the harsh reality" while they decide how best to treat the crippled Voigt. But Voigt has rapidly come to accept the VR world as reality, and now controls his computerised self with a skill and finesse which has impressed the programmers and worried the doctors.

Cambridge biodynamicist Byron Renck explains: "The biomechanical functions of a post-comatose patient must often be 're-learned' by the brain. In this case, Mr. Voigt's brain has unwittingly substituted the oculo-auditory input from the VR helmet for his normal human senses."

Voigt's virtual world covers an area of approximately four acres. It has buildings, vegetation and facsimiles of wildlife - even people. The VR system's technicals are working to increase the world's size and frequently 'visit' Voigt via their own headset terminals and virtual bodies. After suitable psychiatric pre-counselling, Voigt's parents are to be allowed to 'see' him by the same means.

Opinion is divided over Sandy Voigt. Medical and scientific experts are keen to continue with the pioneering technique which, they claim, has already given Voigt "an infinitely better life than he could otherwise expect". But a consortium of religious groups has petitioned the High Court for termination of the life support.

Meanwhile, the VR system's developers have put up 5M Eurodollars to launch a trust fund aimed at maintaining Voigt's BioLab and VR 'world' for the rest of his life, and are believed to be negotiating terms of employment with him.

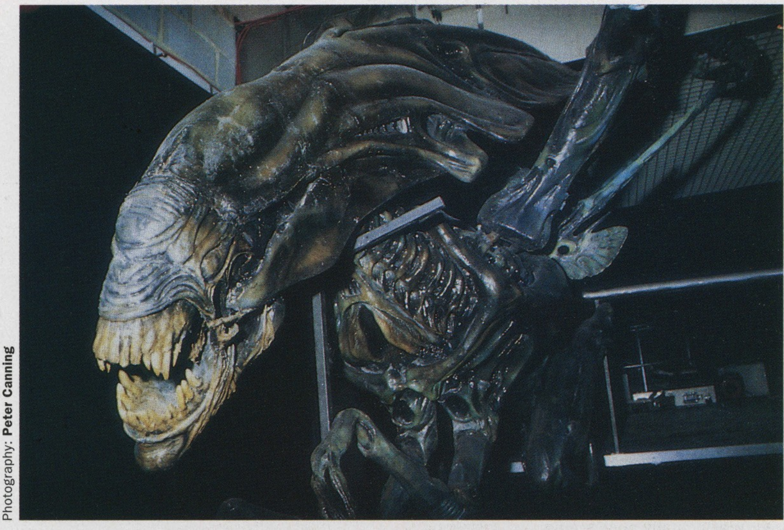
...transmission ends...

Contributions to **Over The Wire** are welcome. Please send your articles (400 words max) to **Edge**, 30 Monmouth St, Bath BA1 2BW. Get your piece printed and win a year's subscription to **Edge**



Alien War: first 'total reality' ride?

Alien War is being branded the UK's first 'total reality' ride. But exploring a maze with men in rubber suits chasing you isn't everyone's idea of a great day out... Edge reports


Photography: Peter Canning

A massive Alien Queen at the entrance to Alien War. You get to meet the whole family within the complex, from eggs and face huggers to full blown xenomorphs

The producers of Alien War, the new attraction at the Trocadero in London, have made some big claims. Forget Virtual Reality, this is Total Reality – or so ran the hype. They've promised a new era in public entertainment, a participatory experience to scare you out of your wits, or to put it in the words of American venture capitalist **Charles Buggy**, 'I hope you brought a change of drawers'.

Alien War follows on from the movie Alien 3. The story is that the Weyland-Yutani Corporation have managed to get a face hugger back to Earth, having captured it for the Bio-Weapons Division. The aliens are being held in a Research Utility and you are set for a tour through the alien's life cycle. At the beginning of your tour, something goes wrong (of course) – aliens are on the loose and you only have 15 minutes to escape the labyrinthine installation to safety.

The experience is that of a sophisticated ghost train on foot. Colonial Marines drag and bully you through the complex, hurrying you past aliens and shooting at them. The public play themselves – civilians caught up in the movie. The maze itself is closely based on the sets from Aliens, and much of the scenery is taken from the original vacformed panels constructed at Pinewood studios.

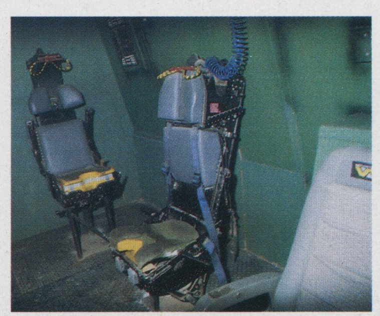
The Colonial Marines guides were selected from hundreds of applicants, and are a burly bunch. After an intensive two week training course and crewcuts, they really look the part. Their heavy body armour is made out of fibreglass from casts provided by Twentieth Century Fox. The Marines also carry huge assault rifles taken straight from the film, plus blank-firing nickel plated Barretas. The participants don't actually get to discharge any weaponry themselves – all the seriously loud fire power is taken care of by the Marines.

An additional member of the group is an anonymous screamer, planted in your midst to heighten the excitement. At one point in the maze, a lift breaks down and the doors are forced open by an alien who drags the screamer out (assuming his comrades let him go, of course). The aliens within the maze

Continued



Sigourney Weaver, suitably terrified after her ordeal...



'One of those things has gotten in here. Check under your seats!' your Colonial Marine escort advises...

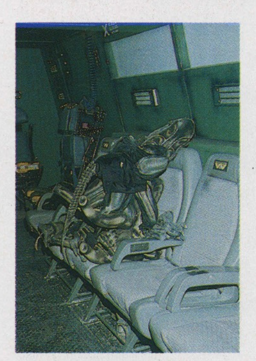
Data stream

Nintendo worldwide sales, fiscal year 1992: **$4.843bn**[1]
Nintendo worldwide sales, fiscal year 1993: **$5.471bn**[1]
Sales in Japan and US of *StarFox* in first month: **1.7m**[1]
Percentage of videogame sales made to consumers under the age of 15: **70**[1]
Annual US cinema attendance: **1.2 billion**[2]
Annual US cinema revenues: **$7 billion**[2]
Growth in US cinema attendance: **0%**[2]
Annual US amusement park attendance: **375 million**[2]
Growth over last ten years in US amusement park attendance:**15-20 million**[2]
Annual amusement park revenues: **$8 to $10 billion**[2]
Total value of UK Sega and Nintendo magazine market, 1993: **£21,831,524**[3]
Total value of UK Sega and Nintendo magazines produced by Future Publishing in 1993: **£9,396,217 (or 43%)**[3]
Percentage of US consumers who said they would buy an interactive TV: **67**[4]
Percentage of US consumers who already own cable TV: **80**[4]
Percentage of US consumers who said they are interested in video-on-demand: **73**[4]
Percentage of US consumers with a videogame system: **40**[4]
Worldwide sales of *Street Fighter II* since launch, June 1992: **6,000,000**[5]
Number of Capcom cartridges sold on SNES worldwide in 1992: **10.6m**[5]
Copies of **Edge** four printed: **52,370**

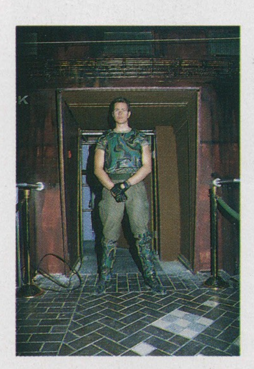
Sources [1]Nintendo of America; [2]Cinewerks, Winter 93; Iwerks Entertainment in-house magazine; [3]Future Publishing based on cover price multiplied by audited circulation figures; [4]Dataquest Survey of 200 American households; [5]Capcom President Kenzo Tsujimoto, quoted in Nikkei Weekly



A typically burly Colonial Marine brandishes an assault rifle with attached grenade launcher, an original prop from the movie Aliens



One of the very scary latex suits, as used in the movie Aliens



A Marine stands sentry at the entrance to the Alien complex

appear both as models and fully mobile figures, again using kit supplied by Twentieth Century Fox. The animated models range from an alien head complete with secondary mouth and dribbling slime, to an unconvincing face hugger which just dangles from the ceiling.

In an era where interactive entertainment is on the rise, what role will Alien War actually play, seeing that it offers very little actual interaction beyond sliding a door open? **Gary Gillies**, the brains behind the venture, thinks it has its part to play. 'Everybody's shooting lasers around or sticking Virtual Reality helmets on their heads. We thought we'd try a completely new thing and do Total Reality. You're not sitting on your backside looking at a film – you're actually taking part in it.'

But in spite of his efforts, Alien War feels like it lacks innovation. The effort to stimulate all senses falls far short: there's no smell inside the complex other than dry ice, and the sound effects have a limited range, including mainly sirens and a throaty rumble whenever an alien is about to appear.

But was it actually scary? **Sigourney Weaver** who said she was 'personally not very brave' before going in, only said 'It was a lot of fun!' when she came out.

And as for **Edge**, we reckoned being cooped up with a hysterical crowd in a maze was more scary than being chased by burly men in rubber alien suits. Still, thankfully the **Edge** 'drawers' remained largely unsullied throughout...

Datebook

December

Computer Shopper Show Christmas '93: Thursday 2nd-Sunday 5th December, Grand Hall, Olympia, London. (071-373 8141). Tickets £7 adults, £5 kids (cheaper when booked in advance). Open 10.00-6.00 Thurs-Sat; 10.00-5.00 Sun.

January '94

Consumer Electronics Show, Las Vegas: Thursday 6th-Sunday 9th January, The Show Centre, Las Vegas, Nevada USA organised by Consumer Electronics Group of Electronics Industries Association. (0101 202-457 8700). Former trade-only event is now open to public.

ATEI: January 25th-27th, Earls Court, London. Contact BACTA, Regents Wharf, 6 All Saints Street, London (071 713 0302), Trade show only.

February

Virtual Reality '94: Novotel, Hammersmith, London (071 976-0405). Feb 1st-Feb 2nd, Open from 9.30-5.00. Tickets £10 on the door. Trade free.

March

AOU Show, March 2nd-3rd. Japan Convention Centre, Makuhari Messe, 2-Makabe Chiba-shi, Chiba, Tokyo (010 81-3-866-9371)

ACME show. March 17th-19th. O'Hare Exposition Center, Chicago, US. For further details call 0101-708-333-9292.

April

International Computer Show: Friday 22nd April-Sunday 24th, Wembley Exhibition Hall (0222-512128), Open 10.00-6.00 Fri-Sat, 10.00-4.00 Sun. Tickets £7 adults, children under 10 £5. Advance ticket discount.

Show organisers: if your show isn't listed here, it's only because you haven't told **Edge** about it. Do so on 0225 442244, or fax us on 0225 446019, or send details to **Datebook, Edge, 30 Monmouth Street, Bath, Avon BA1 2BW**

Just the job?

Tired of your nine-to-five? Fancy making big bucks in the videogames industry? Well, we know the feeling, so here's our selection of the best openings around at the moment. But don't call **Edge**, call them!

Professional animators, 'no previous computer or videogame experience necessary. But must have a proven track record in professional animation.' Probe Software Tel: (081) 680 4142

Games Programmers, 'first class programmers, proven track record in 8086, 68000, 6502 or Z80'. Codemasters. Duncan Kershaw. Tel: (0926) 814132

Graphic artists, 'experience with with 3DS or Alias software running on Silicon Graphics. Or a strong portfolio of Amiga/ST artwork'. Rob Groves, Microprose, The Ridge, Chipping Sodbury BS176AY

Software engineers, 'Amiga/68000 assembly programmers to work on wide range of formats'. Microprose, (address above)

Games designer, 'Highly creative person, able to communicate ideas clearly. Good understanding of how computers work, and an excellent knowledge of games across all formats' Microprose, (address above)

Programmers, Graphic Artists, Designers, Project Managers, 'Salaries range from £10,000 to £40,000. Applicants for all positions must have completed at least one commercial product, and have suitable experience...' Stephen Lloyd Davies, Aardvark Swift Ltd, 75-77 Station St, Swinton, South Yorks S64 8PZ

For more jobs see page 87

Frontier: Elite II Amiga **Super Mario All Stars** Super NES **Mortal Kombat** Mega Drive **Batman Returns** Mega CD **Prime Goal** Super Famicom (Japan) **Street Fighter II** MD (Japan) **Day Of The Tentacle** PC CD-ROM **Microsoft Flight Simulator** PC...



The very latest **charts** from across the entire world of videogaming

Amiga

1 **Frontier: Elite II** Gametek (£30)
2 **Hired Guns** Psygnosis (£35)
3 **Championship Manager '93** Domark (£26)
4 **Premier Manager 2** Gremlin Graphics (£26)
5 **Space Hulk** EA (£35)
6 **Premier Manager** Gremlin Graphics (£26)
7 **Sensible Soccer '92/'93** Renegade/Mindscape (£26)
8 **Graham Taylor Soccer Challenge** Buzz (£10)
9 **Goal!** Virgin (£31)
10 **Project X** Team 17 (£13)



Despite being a real slowcoach on the standard A500, *Frontier* enters at the top spot

Six of the top ten Amiga games this month are soccer games, which suggests that the Amiga software market is stuck in a rut. *Elite II* flounces its way to number one, but is hamstrung by the speed of the Amiga, compared to the rapid PC version.

Super NES



What can we say about *Super Mario All Stars* that hasn't been said already? Instant legend: go and buy it this very instant

10 **Starwing** Nintendo (£50)
9 **Krusty's Super Fun House** Acclaim (£45)
8 **Super Star Wars** JVC (£50)
7 **Kevin Keegan's Player Manager** Imagineer (£48)
6 **Super Kick Off** Imagineer (£48)
5 **Mario Kart** Nintendo (£40)
4 **Striker** Elite (£45)
3 **Mortal Kombat** Acclaim (£60)
2 **Street Fighter II Turbo** Capcom (£60)
1 **Mario All Stars** Nintendo (£50)

Mega Drive

1 **Mortal Kombat** Acclaim (£50)
2 **Street Fighter II Champ Edition** Sega (£60)
3 **Jungle Strike** EA (£45)
4 **Micro Machines** Code Masters (£35)
5 **Aladdin** Sega (£50)
6 **Ultimate Soccer** Sega (£45)
7 **Sonic The Hedgehog 2** Sega (£40)
8 **PGA Tour Golf** EA (£40)
9 **NHLPA Hockey 1994** EA (£45)
10 **Jurassic Park** Sega (£50)

Mega CD

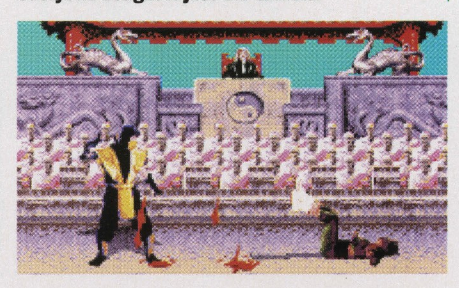
1 **Batman Returns** Konami (£50)
2 **Night Trap** Digital Picture (£50)
3 **Final Fight** Capcom (£45)
4 **Road Avenger** Renovation (£40)
5 **Sherlock Holmes** Sega (£45)
6 **Jaguar XJ220** Core Design (£45)
7 **Prince Of Persia** JVC (£45)
8 **Afterburner III** Sega (£40)
9 **Wolfchild** Sega (£40)
10 **Black Hole Assault** Sega (£40)



***Batman Returns* on the Mega CD – even though he'd never been away in the first place**

The same old M-CD titles inhabit the top ten – very few of which deserve the accolade. But expect all this to change next month when *Thunderhawk* should fly straight to the top.

MD *Mortal Kombat* – not a patch on *SFII* but everyone bought it just the same...



SFC (Japan)



SNES *Prime Goal* appears from nowhere to put one in the back of the net, so to speak

Namco's J-League soccer simulator sneaks in past *Super Mario Collection* to take the top slot. The Japanese, if you didn't know, are soccer mad. It's actually surprising that *Super Mario* has done that well, since the Japanese have seen all four games on the NES at one time or another – including the UK/US *SMB2* which was *Doki Doki Panic*.

1 **Prime Goal** Namco (¥8500)
2 **Super Mario Collection** Nintendo (¥9800)
3 **Mario And Wario** Nintendo (¥6800)
4 **Winning Post** Koei (¥12800)
5 **Seiken Densetsu 2** Square Soft (¥9800)
6 **Suzuka Eight Hours** Namco (¥8800)
7 **Sailor Moon** Angel (¥9800)
8 **Torneco's Great Adventure** Chun Soft (¥9600)
9 **Street Fighter II** Capcom (¥9980)
10 **Super Bomberman** Hudson Soft (¥7800)

Yep. That tentacle's still there...



Day Of The Tentacle still reigns supreme in the CD charts, but given the wealth of stunning new titles on their way, this situation should soon change. Be on the look out for titles like *Rebel Assault*, *Saurus*, *Wolfpack* and *MegaRace* – to name but a few...

MD (Japan)

1 **Street Fighter II** Capcom (¥9800)
2 **Silpheed** GameArts (¥8800)
3 **Rocket Knight Adventures** Konami (¥8800)
4 **Shining Force 2** Sega (¥8800)
5 **3x3 Eyes** Sega (¥8800)
6 **Gunstar Heroes** Sega (¥8800)
7 **Ecco The Dolphin** Sega (¥8800)
8 **Keio Flying Squadron** JVC (¥8800)
9 **Jurassic Park** Sega (¥8800)
10 **Puyo Puyo** Sega (¥4800)



***Street Fighter II* tops the Japanese MD chart. And why not? It's flamin' great...**

PC CD-ROM

1 **Day Of The Tentacle** US Gold (£46)
2 **Dune** Virgin (£50)
3 **The 7th Guest** Virgin (£70)
4 **Dracula Unleashed** Mindscape (£50)
5 **Return To Zork** Activision (£50)
6 **Sherlock Holmes** Mindscape (£40)
7 **Kings Quest 6** Sierra On-line (£50)
8 **Great Naval Battles** US Gold (£45)
9 **Space Shuttle** Mindscape (£40)
10 **Eric The Unready** Accolade (£35)

PC



You can't keep a good flight sim down. The grandaddy of them all is back at no. 1

As the PC's appeal broadens so does the variety of titles in the top ten. Sadly, this variety extends to a certain dismal beat 'em up (which shall remain nameless). Be warned: avoid this turkey!

10 **Links – the Challenge Of Golf** Kixx (£17)
9 **X-Wing** US Gold (£46)
8 **Zool** Gremlin Graphics (£35)
7 **Privateer (Speech Park)** EA (£20)
6 **Populous & Promised Lands** Hit Squad (£15)
5 **Kasparov's Gambit** EA (£45)
4 **Street Fighter II** US Gold (£30)
3 **Wing Commander: Privateer** EA (£50)
2 **Frontier: Elite 2** Gametek (£40)
1 **Microsoft Flight Simulator** Microsoft (£40)

Most Wanted

After the brilliant *Crash 'n Burn*, Crystal Dynamics now have a loyal following. *Total Eclipse* is the most wanted this month, with Elite's *Power Slide* coming a close second. Send your 'most wanted' lists to Edge, 30 Monmouth Street, Bath, Avon BA1 2BW. All lists gratefully received.

5 **Crescent Galaxy** Jaguar
4 **Virtua Racing** Mega Drive
3 **Forgotten Castle** PC
2 **Power Slide** SNES
1 **Total Eclipse** 3DO

Demolition Man Saurus **Dragontales** MegaRace **R-Type III: The Third Lightning** Aliens Vs Predator **Chequered Flag II** Captive II **Scavenger 4** The Journeyman Project...

Prescreen

There's a veritable feast for the senses in this month's **Edge** Prescreen. Go ahead and gorge yourself on rendered images of the like you've never seen before... Like stills from the first film licence to hit the 3DO – a stunning version of *Demolition Man* – or the latest titles from French programming team Cryo, including *Saurus*, *Dragontales*, and the wonderful *MegaRace* (another game that's destined for the 3DO).

We also serve up the latest hot properties for the Atari Jaguar; *Aliens Vs Predator* and *Chequered Flag II* – the latter a sequel to the old Lynx driving game.

And for shoot 'em up fans, we've also got the latest delicacy in the *R-Type* series, plus *Scavenger 4*, Psygnosis' follow-up to *Microcosm* – once again a graphically stunning 3D shoot 'em up, but this time with gameplay to match the visuals, or so they claim. Grub's up...

32



28



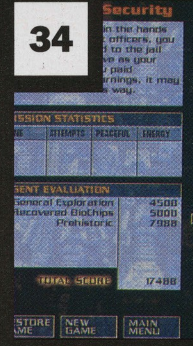
19

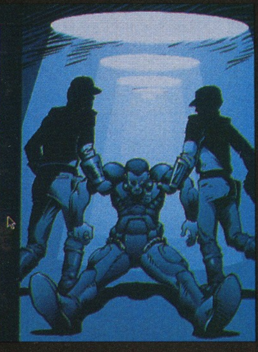


24



34

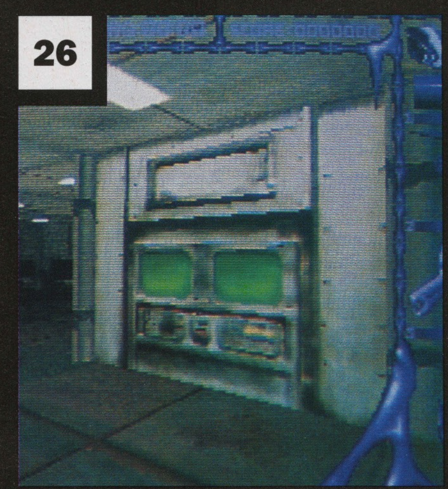




20



26



Demolition Man

Bladerunner meets T2 in Stallone's new action flick – and the 3DO game isn't far behind...



CD storage allows room for lots of scene-setting graphics – like Sly's mean 'n' moody stare

Format: **3DO**
Publisher: **Virgin**
Developer: **In-house**
Release date: **April 93 (US)**
Size: **1 CD**
Origin: **US**

Described by Barry Norman on Film '93 as something that would 'make a better computer game than a movie', Demolition Man is this year's big sci-fi action flick. Following in the steps of Terminator 2, it's a futuristic one-on-one shootout, and like the T2 coin-op, *Demolition Man* is an *Op Wolf* clone.

Developed alongside the movie production, footage of Sylvester Stallone and Wesley Snipes was generated by videoing them against greenscreen, isolating the image and then cleaning them up on an Apple Mac, frame by frame. Virgin also had access to sound effects and dialogue from the film, enabling them to make full use of the CD audio.

Ignoring what little plot there is, cop John Spartan (Stallone) is on the trail of bad guy Simon Phoenix (Snipes). The game segues from scene to scene using film clips and pre-rendered backgrounds streamed off CD. A static screen then appears at which point you take control of Spartan and direct his fire. Once the screen is cleared of baddies, the action moves to another location.

Okay, so the gameplay's hardly state of the art, but the visuals are very effective and from what **Edge** has seen it's at least a slick, stylish action-fest.

Following Terminator 2, it's a futuristic shootout, and like the *T2* coin-op, *Demolition Man* is an *Operation Wolf* clone



The bulk of the action takes place against static backdrops (above and top). Actors were filmed against greenscreen, isolated, cleaned up and turned into sprites



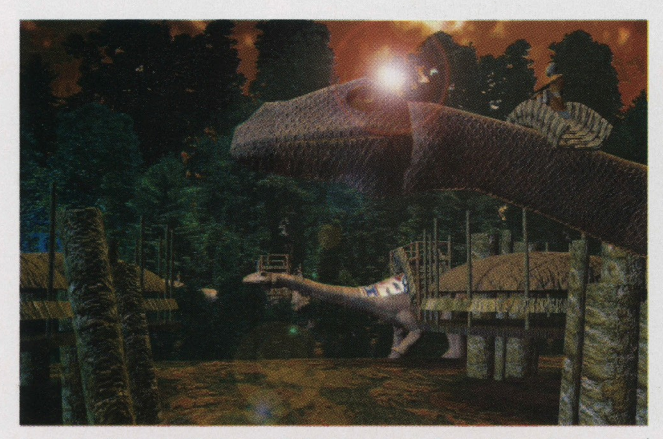
Shots of Stallone in suitably heroic poses are overlaid on pre-rendered 3D backgrounds to link the action scenes. Clips of the movie are also stored on CD



Saurus is the smallscreen equivalent of Jurassic Park, with thousands of frames of 3D rendered dino-mayhem

The Cryo game

The argument that CD-ROM just isn't interactive could well be quashed by French coders, Cryo. With their new CD-ROM titles, they're proving that graphics *are* everything. **Edge** explores



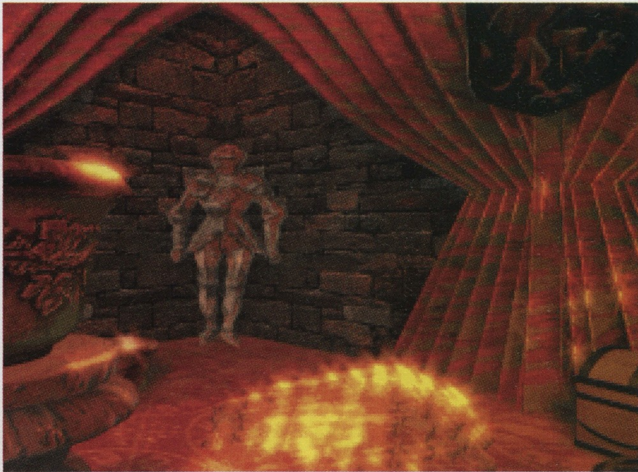
Once allegiances with the gentle herbivores are formed, the player has a useful mode of transport between his bases

Cryo are fast becoming synonymous with CD-ROM development. Their three latest titles – *Saurus*, *Dragontales*, and cover star *MegaRace* – all use similar systems of bolting gameplay onto pre-rendered graphics streamed off CD – and if nothing else, they all look gorgeous.

Saurus contains some of the most enigmatic images **Edge** has seen for a while. This PC CD-ROM title is set in a land of legend, where humans and dinosaurs co-exist. The story follows your character's efforts to form







***Dragontales* plunges the player into the familiar world of dungeons, mazes and spellcasting. Fast becoming de rigeur in adventure games, all the scenery is pre-rendered and stored on CD. However, Cryo are intent on realising everything this way – including all the characters you meet**

allegiances with peaceful herbivores like the Diplodocus, in order to do battle with the violent meateaters: Tyrannosaurus Rex and co.

Jean-Martial Lefranc, founder member of the 50-strong Cryo team, expands: 'You first have to discover what your destiny is; then you must find out how to make the good dinosaurs ally with you. Then you go and fight against the bad dinosaurs.

'It's an adventure game in a rendered environment, but you are able to move around this environment, meet characters and interact with them. It's a point and click interface: it's different but it's going to have the look and feel of *The 7th Guest*. The big cinematic scenes are included as part of the scenario.'

These cinematic sequences should be the game's major lure. Since August of last year, a ten-man team has been modelling and animating dinosaurs in Autodesk's *3D Studio*. One sequence can take as long as 48 hours to render and there are about 50 rendered sequences, each lasting between five and 20 seconds apiece at 24 frames per second. With around 18,000 frames, it's no surprise that Jean thinks the 'CD is completely full!'

With the appearance of the movie Jurassic Park – which Jean admits will help the marketing of *Saurus* – Silicon Graphics workstations have been all the rage. 'We have some Silicon Graphics machines already,' says Jean, 'but the real issue in using SG machines is the definition you want to end up with. I think it's useless using Silicon Graphics to do VGA images, but as the new consoles approach broadcast definition it starts making sense.'

Saurus goes on sale in the Spring of '94 and is published by Virgin.

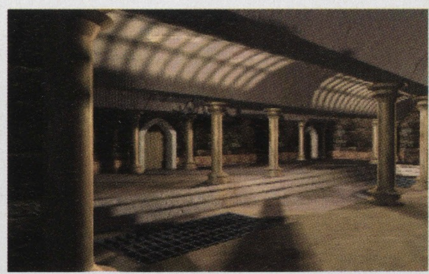
Cryo's second project is an RPG in the Dungeons & Dragons mould, being developed for Mindscape on PC CD-ROM. One could be forgiven for thinking this an oversubscribed genre, but Jean is confident that this game is different.

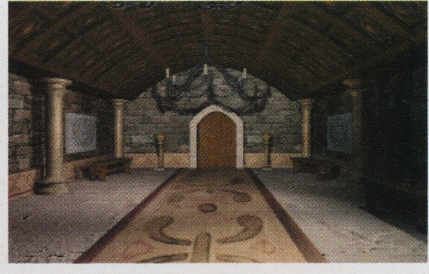
'The main innovation in *Dragontales* is that you're going to be

Since August of last year, a ten-man team has been modelling and animating dinosaurs

Continued next page







All these images from *Dragontales* were produced using *3D Studio* on the PC, and make the scenery in *The 7th Guest* look like it was done on *Mario Paint*. Of course, rendering stills is a doddle; making them move fluidly within a game structure is another carton of worms entirely



The beauty of using CD-ROM to store the tracks for *MegaRace* is that you can do what you like. Unfettered by the restrictions of 3D polygons, your racetrack can be in the middle of a neon city (top) or in an asteroid belt (above)

Continued

able to interact realtime with 3D generated characters in a 3D generated environment,' he explains. 'The backgrounds and characters are all rendered; they are quite detailed. The issue here was to develop a zooming system that allows you to interact with the characters – we've produced images of the characters as seen from various points of view.'

Dragontales should be dropping jaws when it hits PCs in the new year.

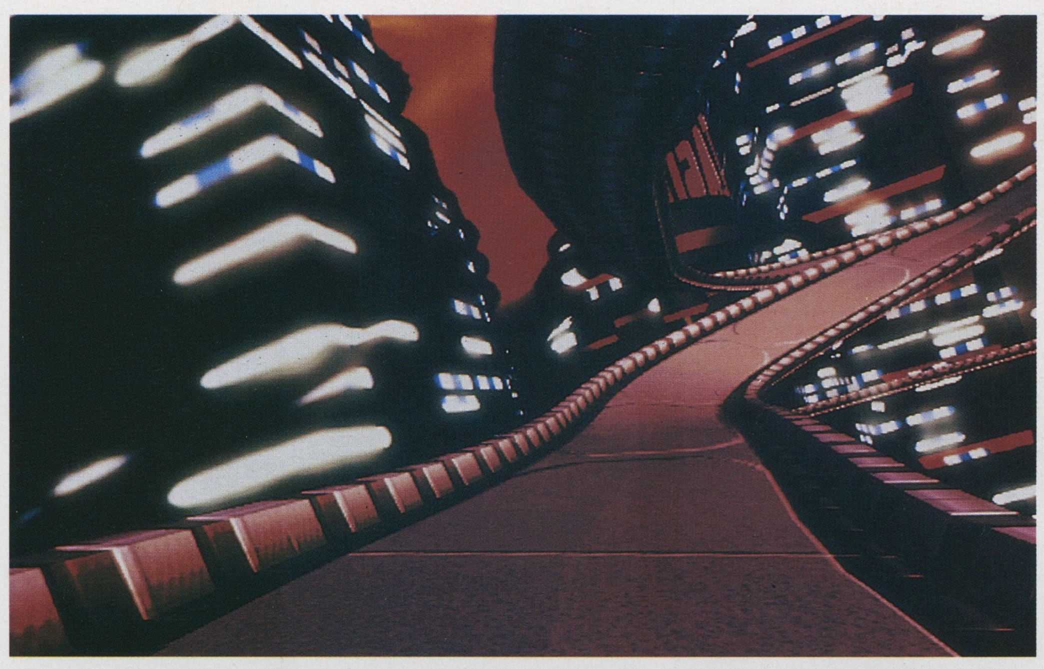
Destined for PC-CD ROM, 3DO and Mega CD, *MegaRace* is possibly Cryo's most technically proficient product. Jean explains, 'The idea of the game was that the racetrack and surrounding scenery was rendered, and that the cars are put on as sprites. The big technical trick is to have the sprite follow the rendered track as you play, and getting the car to go away from you or getting closer, as you race.







The main problem Cryo encountered with *MegaRace* is the sheer volume of sprites needed to realistically portray the player's car, and all the other cars on the course. There are a number of different vehicles at your disposal, each one with different handling characteristics – and dashboard



'The big technical trick is to have the sprite follow the rendered track as you play'

***MegaRace* on 3DO should certainly give *Crash 'n Burn* a run for its money. The extra colours afforded the Panasonic machine certainly make a difference; and the beauty of CD means designers don't have to skimp on scenery...**

Like *Silpheed* or *Kether*, the scenery always remains the same – but Cryo have managed to incorporate a high degree of interactivity into what is essentially a non-interactive system.

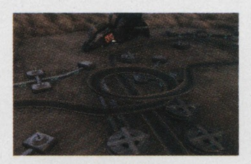
'You have to store the relative position of the car to the track, because the track actually interacts with the car,' attests Jean. 'What happens is that track contains zones that affect your car: you can get booster points, a weapons point, a braking point, and the car even spins when you cross a certain zone. The bulk of the game code enables the sprite car to interact with the pre-calculated background.'

And, of course, speed is of the essence: the program cleverly increases or decreases the number of frames displayed per second to give the impression of acceleration or deceleration, accordingly.

Difficult as this may sound, Jean maintains that the car is the more technically difficult element: 'Because the car is seen from lots of different angles, you have to hold lots of different sprites in memory. That takes up the most RAM space, so we've had to find a tool that would provide very effective compression of each frame.'

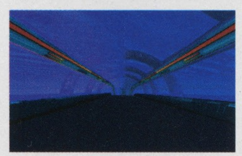
There are 17 tracks in *MegaRace* (plus a few hidden ones) and a single lap can take anything from 20 to 60 seconds. To keep the scenery shifting at a decent rate, image compression squeezed each frame down to just 5K.

Given that *MegaRace* is 3DO bound, comparisons between it and *Crash 'n Burn* are inevitable. 'I think *MegaRace*'s graphics are going to be a lot better,' says Jean. 'The gameplay is going to be a lot deeper, and I think the acting on the video will be a whole lot better, although we haven't got the same amount of budget to spend on so many wigs!'



A scene-setting shot of one of *MegaRace*'s 17 tortuous tracks



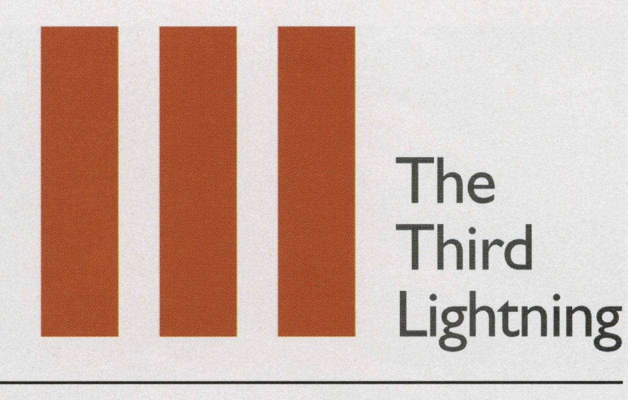


While some interactivity might be lost in using a CD-ROM system, you can certainly show things that no home machine could handle in polygons. The next closest thing to this is actually being there...



A glorious option screen from the 3DO version. The main difference is colours: the PC version is 256 while 3DO can handle 24bit colour

R-Type III

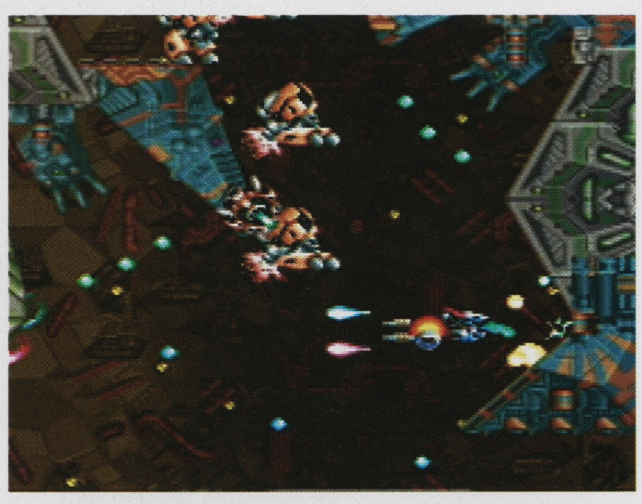


The Third Lightning

Edge takes up arms against the evil Bydo Empire in the third installment of Irem's classic deep space saga...



***R-Type* wouldn't be *R-Type* without a squirmy level full of wriggly, vaguely amphibian aliens (above). Reach the end and it's killer sperm time (right)**



A new ingredient in the *R-Type* recipe is this diagonally scrolling section. Intelligent use of The Force is needed to protect and survive

Format: **Super NES**
Publisher: **Irem**
Developer: **In-house**
Release date: **Dec (Japan)**
Size: **16 Mbit**
Origin: **Japan**

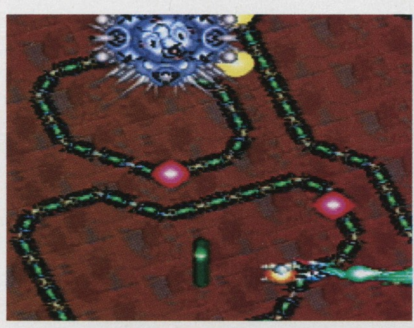
Mention the name Irem to most gamers, and they'll reply 'R-Type'. Their ground-breaking 1987 coin-op became an instant classic and paved the way for a new breed of graphically outstanding shoot 'em ups.

R-Type appeared on most home formats – including a never-bettered version on the PC Engine – and was sequelled in 1990. However, things took something of a downturn with the SNES game, *Super R-Type*. A mixture of *R-Type I* and *II*, the game was plagued by slowdown and frustrating restart points. It was still successful but failed to make any converts.

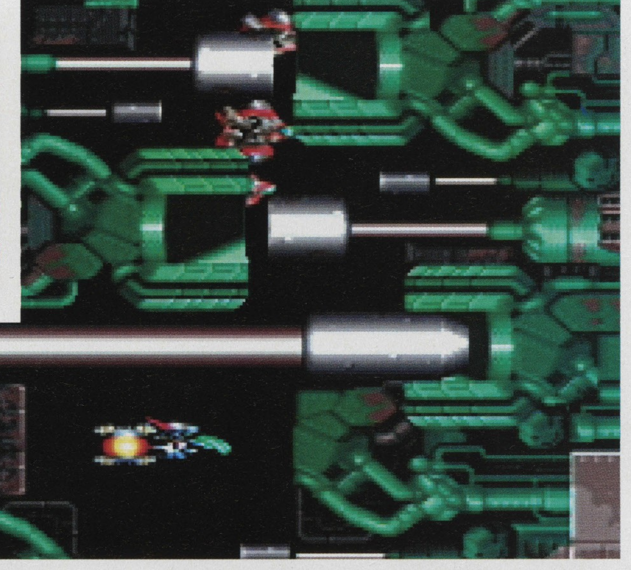
With *R-Type III*, Irem have cut down the size and complexity of the Bydonese baddies – reducing slow-down to a minimum – and have restructured the title so that it's less frustrating to play. The programmers have also discovered the wonders of Mode 7, using it to display rotating levels and bosses that zoom into and out of the screen.

Gameplay retains all the classic *R-Type* elements: otherworldly graphics, level guardians and the unmistakable R-9 ship, complete with upgradeable weapons and Force shield – the trademark sphere that sits on the front or rear of the ship.

In this third outing, the R-9 has



Having survived the giant crusher (right) you are faced with this Mode 7 monster. Avoiding the circling blobs, the spinning creature *and* its laser fire is well hard



Moments before these walls of metal come crushing together, a circle of light blinks in the background showing you where to park your ship. Miss it and it's certain death

Removing the slow-down, Irem have reduced the impact – there's a certain weediness to it all now...

been upgraded so it can carry different Forces. There are three types selectable at the start of the game, differing in aesthetics and in the way that power-ups are utilised, with varied weapon blasts or laser bolts.

As with previous games, the Force is important tactically because it both acts as a shield and also directs the bulk of your firepower. Certain areas require that it be attached to either the front or back of the R-9 – and the point at which you have to 'change ends' is usually in a confined space, which adds to the challenge.

Super R-Type's two-stage power-up is still in evidence, where holding down on the fire button charges up the ship's blaster; release the button and a plume of firepower hurtles across the screen. Hold down the button for longer and the second-stage meter flashes in preparation for an even bigger wave of seething, white-hot plasma energy.

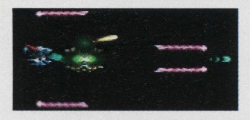
Of course, while you're sitting around for the power meter to hit max, your temporarily impotent ship is something of a sitting duck...

In removing the cause of the slow-down, Irem have also reduced the impact of the game. There's a certain weediness about it all now: bosses all fit easily within a single screen, and mid-level baddies are indistinguishable from run-of-the-mill cannon fodder.

Even the Mode 7 stages are less of an event – in fact, they usually interrupt the flow of the action, making you sit around until it's finished doing its rotating and scaling before letting you continue the battle.

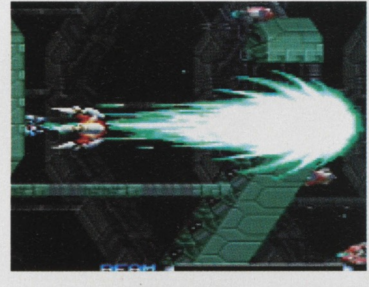
And *R-Type III* has done away with difficulty levels, so to progress you'll have to meet the challenge on offer. The Japanese version is available on import now with a UK release planned for early 1994. **E**







For *R-Type III*, Irem's designers have incorporated three different 'Force' shields (top to bottom). Here the first weapon pick-up is discharged in a variety of ways





Early on you find yourself hurtling through alien constructions (above and top); like most *R-Type* scenery, it's meaningless but very smart

Paying smallscreen homage to Sega's phenomenally popular *Virtua Racing*, the tentatively-titled *Chequered Flag II*

Rebellion Software

As Atari's licencees start to crawl out of hiding, **Edge** visited Oxford-based developers, Rebellion, for a look at two new titles...

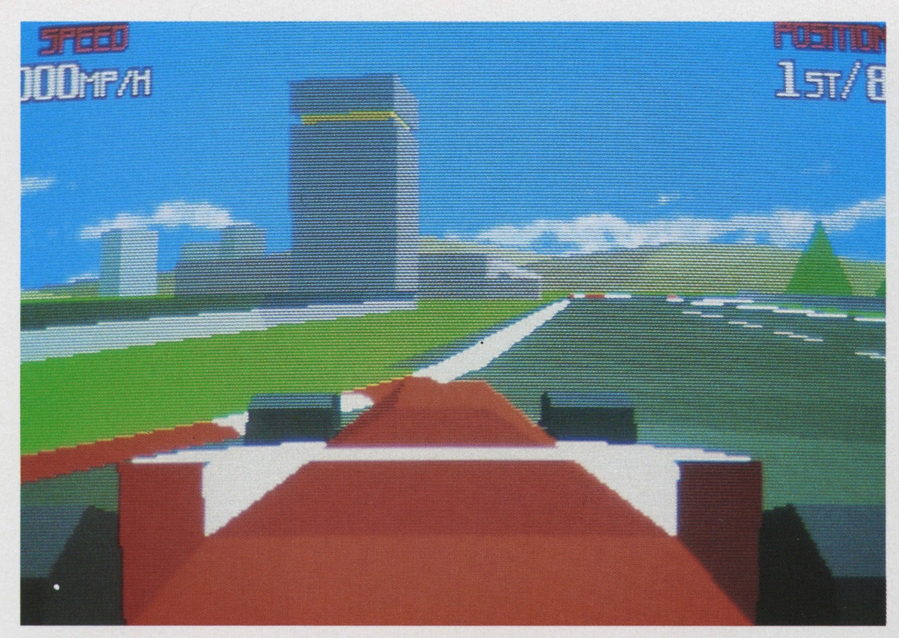


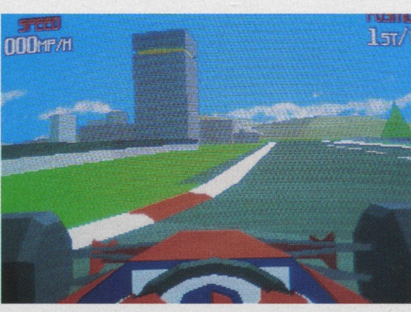
The external views are by far the most appealing aspect of *Chequered Flag II*. Pressing a button zooms you out from behind the car

If Atari's Jaguar takes off, Oxford-based developers, Rebellion, will be one of several teams pinning their hopes on a rosy future for the machine.

After attending a conference around a year ago, where Atari dangled the Jaguar's tempting specs in the faces of various developers, the nine man outfit was commissioned for two games – a polygon-based driving game, *Chequered Flag II*, and a firstperson perspective adventure/shoot 'em up based on the *Aliens vs Predator* licence.

Edge asked Rebellion's creative



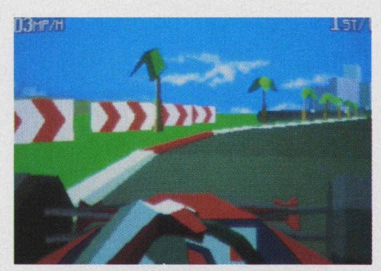




A selection of shots from *Chequered Flag II* shows the different perspectives available. The in-car viewpoint (top right) keeps those driver's hands firmly in view – they're just polygons like all the other graphics in the game. As far as smoothness goes, though, there's still work to be done

'The Jaguar's superb, and so much a step up from previous consoles.'

director, **Jason Kingsley**, about the console and its potential. 'It's superb, and so much of a step up from previous consoles. Even comparisons with PCs are favourable. I'd say, that speed-wise in 256 colours, a 486 DX2 (66MHz) PC will just about match the performance of the Jaguar. But then the Jaguar will probably be able to



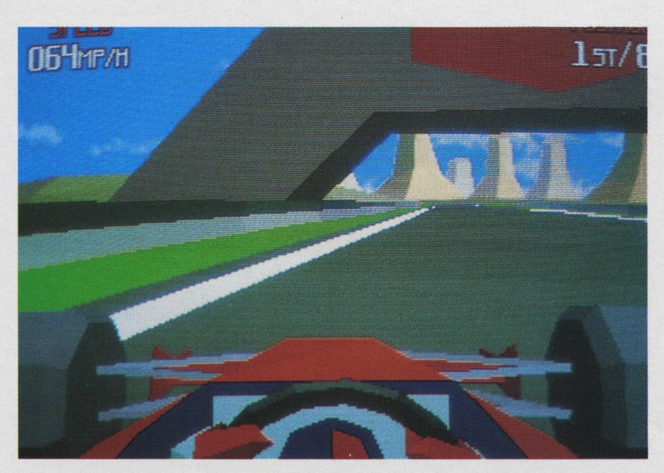
Note how the driver's arms animate as he turns the wheel. It's a nice effect that works well

offer the same speed in 16 or 24bit colour. Of course, there are always things you'd like to be changed with a new system, but that's going to be the same with every system ever released. For the foreseeable future, this is a great platform to work on.'

Aliens vs Predator, the more complete of Rebellion's two games, looks slick, boasting texture-mapped 3D corridors and smooth scrolling. However the graphics weren't created in the usual way. Instead of being drawn on the screen in the traditional manner, Rebellion opted for model-making techniques, constructing small panels to make up the walls, floor and ceilings, and using latex models for many of the sprites. These were then photographed and digitised for inclusion in the game. 'Funnily enough,' Jason adds, 'we thought the process would take longer than drawing everything, but it actually worked out quicker.

'We also dressed someone up in the actual costume that Hicks wore in the Aliens movie and then photographed and digitised him for a sequence of animations. Of course, all these graphics eat up a lot of space, and even with the Jaguar's

Continued next page



Rebellion maintain that, despite the simple polygons, the graphics here are just as technically advanced as those in *Aliens vs Predator*



The most impressive aspect of *Aliens vs Predator* is the way you see through the windows and doors into the other rooms. The whole environment is texture-mapped, and when you see it move it's pretty damn impressive too

Continued

compression, we're restricted more than we'd like to be. We're working on 2Mb cartridges for the first two games, and you still can't put a lot of 16 or 24bit colour bitmaps into such little space.'

The static screens in the game use 24bit colour – over 16 million colours – while the bulk of the game uses 16bit colour which displays around 65,000 colours onscreen.

The game is essentially a 3D shoot 'em up with strategic overtones set in a space station. There are seven levels, and you start on the central level, making your way either to the top floor where the Predator ship has docked, or down to the lowest level, where the Alien ship lies. It's your choice, and you can take control of one of three characters – either an Alien, the Predator, or a Colonial Marine. Playing a Marine, your objective is to rescue your troops and, obviously, get rid of all the aliens and predators. Playing an alien or predator involves taking out the opponent's ship while collecting as many dead Marines as possible!



Much further down the road is *Dungeon,* the working title for a firstperson adventure

At the time of our visit, the game was a few weeks from completion and looked extremely good. A lot of thought has gone into the layout of the station – offering players multiple routes and lots of secret locations to discover. The 3D scrolling was fast and smooth – currently running at between 12 and 15 frames per second. And while this isn't quite as smooth as some of the newer DX2 RPGs, the level of detail and depth of vision more than make up for it.

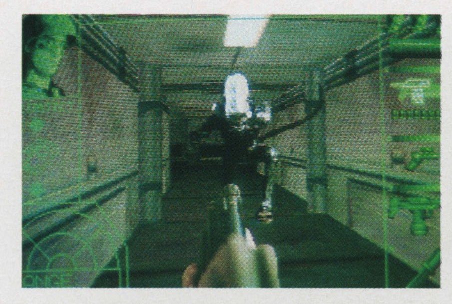
The only thing that was missing at the time of the visit were the 16bit samples, also being handled in-house. When compared to Activision's sad *AVP* beat 'em up for the SNES, this looks like being the first game to do justice to the licence.

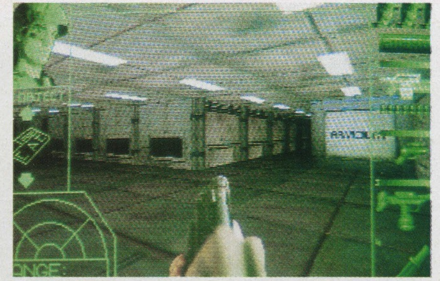
Rebellion's other project in development, currently codenamed *Chequered Flag II*, is less impressive however. Some aspects of the game are great – particularly the look of the depth-cued graphics and the choice of perspectives. By using plain polygons,

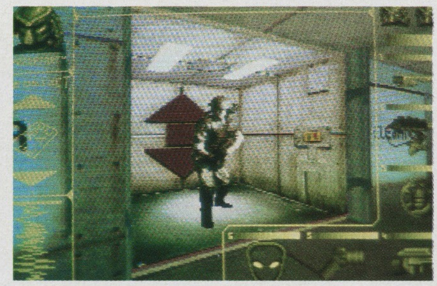
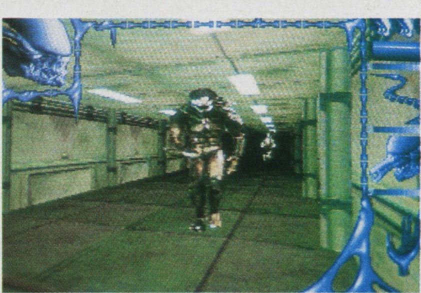
'The Jaguar's power has truly great potential for detailed real-time 3D scenes.'



The model panels for AVP's interiors were shot and then digitised





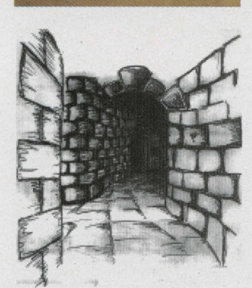
Each character has his own onscreen interface. Top left: A Colonial Marine takes on an alien face to face. Top centre: Open spaces give a much wider perspective. Top right: Even in the distance, the detailed texture-mapped writing is clear to read. Bottom left: Inside the head of the Predator looking through a doorway. Centre: A Colonial Marine awaits to exit a lift bay. Bottom right: Inside the Alien and with a Predator clearly in view

the game tries to emulate *Virtua Racing* – which is no bad thing in itself – but **Edge** reckoned the car was decidedly tricky to handle and the slightly sluggish frame rate spoils the 3D effect. To be fair, the developers said there's still a fair amount of work to do, and they're recoding an important part of the polygon routine which should push the frame rate up significantly. The width of the track will increase too – something that needs to be done if the comparisons with *Virtua Racing* are to be borne out.

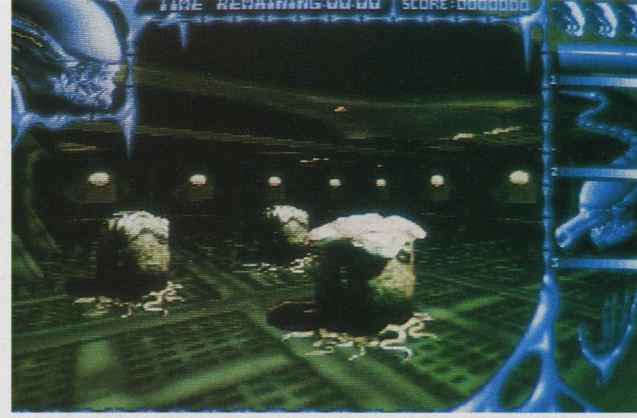
There are two other projects in the pipeline at Rebellion, but both are still in the early design stage. The first, a 3D dungeon game using the *Aliens vs Predator* graphic engine, will be in the mould of the *Ultima Underworld* games including skeletons – again digitised from models – and all manner of typical fantasy creatures.

The other game's a combat flight simulator set in a futuristic Cyberpunk-style city. The intention is to create a Bladerunner-esque environment, including effects like smog and neon lights.

'The thing about the Jaguar,' Jason reckons, 'is that its power has truly great potential for detailed real-time 3D environments. We're really pushing to make the games as interactive as possible.' **Edge** only wishes more developers would do the same. Expect both games to appear for the Jaguar sometime around January. **E**



A model skeleton and a preliminary sketch. Both from *Dungeon*



Even the eggs were modelled in latex before being photographed and fully digitised

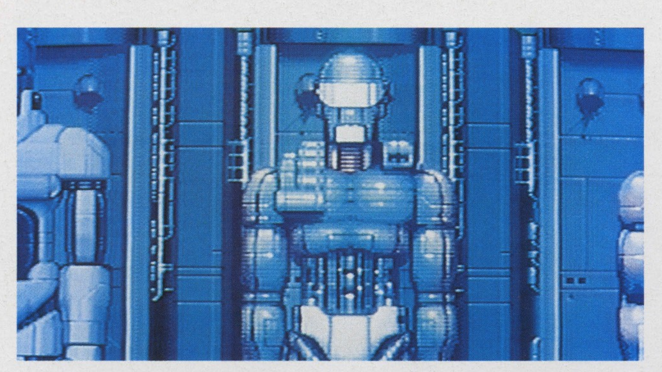


Credits

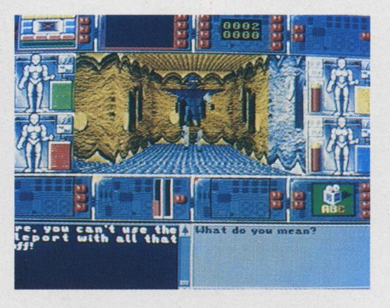
Creative Director: Jason Kingsley
Programmer (*AVP*): Mike Beaton
Programmer: Andrew Whittaker
Programmer (*CFII*): Rob Dibley
Graphics: Toby Harrison-Banfield
Graphics: Stuart Wilson
Graphics (*CFII*): Justin Rey
Sound: Chris Kingsley

Captive II: Liberation

CD³² owners have had little to shout about. **Edge** takes control of the game that's set to change all that...



With the luxury of CD storage, *Captive II* includes animated scenes. This is one of the droids who, you hope, is going to save your neck



The new, texture-mapped game world is a far cry from the original *Captive*

With 650Mb at its disposal *Captive II* should be even bigger than its vast namesake

Format: **Amiga CD³²**
Publisher: **Mindscape**
Developer: **Tony Crowther**
Release date: **Jan '94**
Size: **1 CD**
Origin: **UK**

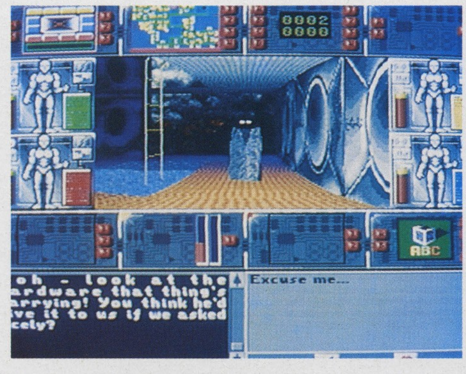
The original *Captive* caused something of a stir back in 1991. It was a blatant rip-off of *Dungeon Master,* but no-one could deny that it took the genre several steps forward.

Now, 2½ year's later, Tony Crowther has reprised his game for the CD³² using CD storage to bolt on slicker presentation and, more importantly, he utilises the extra power and colour of the CD³²'s AGA chipset to texture-map the 3D scenery.

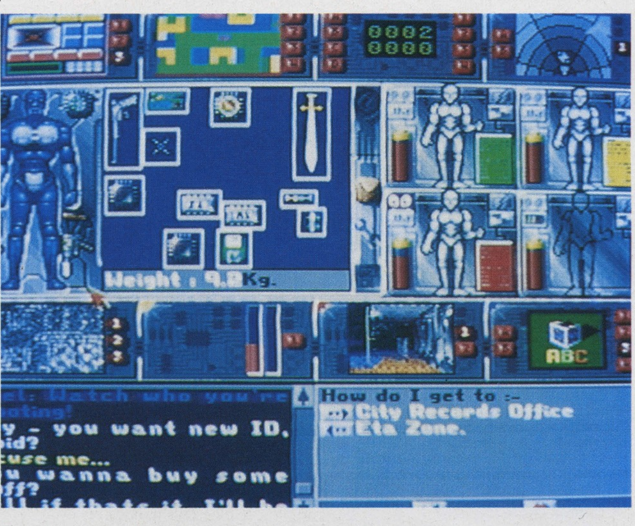
Like its predecessor, *Captive II* places you in charge of a quartet of droids who you can control individually: only with their assistance can you guarantee your freedom.

This time the droids are so much more sophisticated, able to carry a variety of heavy weaponry and items, and can individually interact with other characters that they meet.

And with 650Mb at its disposal, *Captive II* should be even bigger than its vast namesake. **E**



Of course, if open debate fails, you can always rely on a hefty blast from your variety of weapons



Here the full wealth of controls is apparent. Inventories, maps, energy levels... and even the other droid's viewpoint (see pic on left)


PC Screen shot


AMIGA Screen shot


PC Screen shot


AMIGA Screen shot

DAVID BRABEN PRESENTS

FRONTIER

ELITE II

1985 – ELITE

"Elite. Game? It's a way of life!"

Personal Computer World magazine

1993 - FRONTIER - ELITE II

"The ultimate in space adventure, Frontier is the single most important step forward for games this decade."

CU Amiga – 97%

only the very best mature with time



GAMETEK

Available on PC, AMIGA, ATARI ST

© David Braben 1993. Licensed by Konami. Distributed by Gametek

Scavenger 4

Psygnosis' *Scavenger 4* takes the CD shoot 'em up into the real world. Edge gets on the case...



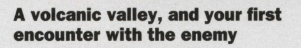




Like *Microcosm*, *Scavenger 4* is full of great cut scenes. But, unlike *Microcosm*, there's a bit of real gameplay too...



The first level takes place on a volcanic planet. The fiery effects are quite staggering, as is the level of detail



A volcanic valley, and your first encounter with the enemy

Format:	**FM Towns Marty**
Publisher:	**Psygnosis**
Developer:	**In-house**
Release date:	**TBA**
Size:	**1 CD**
Origin:	**UK**

Psygnosis were one of the first British companies to fully realise the advantages of producing software on CD. Their first effort – *Microcosm* on the Marty – was encouraging, but sadly suffered from the 'all show and no go' syndrome. With *Scavenger 4*, Psygnosis are hoping to show the world that a game of real quality can be nestled beneath a lavish rendered graphic exterior.

Well, predictably, *Scavenger*'s got all the splendid rendered visuals of *Microcosm* for starters. The landscapes that you fly over are very impressive: smooth, colourful, and above all original – some of the planets even have fire erupting through their surface.

The game is actually set within the same Bator system used in *Microcosm*. **Richard Browne**, Psygnosis producer, explains 'We're attempting to build a







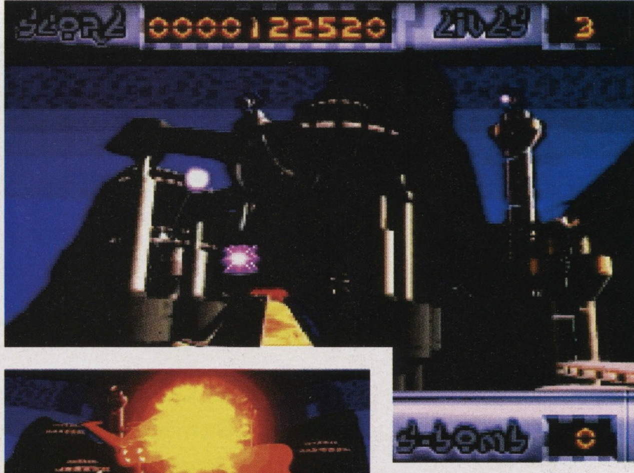


Although it may look great, *Scavenger 4* is also sonically quite impressive. Even more so when you discover that the sound – unlike these visuals – is not being streamed off the CD. Psygnosis have used the Marty's internal sound chip to great effect. This phoenix (above) is an end-of-level boss



This end of level boss is quite tricky, but when you eventually succeed...

... you know by the size of its explosion that it was well worth the effort.



Another explosion. This one's created in *Alias*, Psygnosis' new SG 3D package

The bosses are incredibly detailed, but you'd expect nothing less from Pygnosis

whole new solar system, which in a few product's time will be a believable atmosphere, with characters and craft from one game being seen in the next.'

Interestingly, the 'game window' actually looks bigger than the one in *Microcosm*, but it's really just the same. The programmers have used a clever stretching technique to make the main gameplay window fit the full screen of the Marty.

But that's not the only thing that differs from *Microcosm*: Psygnosis have also switched to a second type of 3D graphics package on their Silicon Graphics machines. In addition to *Soft Image*, *Alias* – the same package used to build the dinosaurs in Jurassic Park – has been used to produce some very clever graphical effects. Things like 'Lens Glare' have been added to create some brilliant scenes. *Soft Image* was used to create the fire effects on the volcanic planet.



According to Richard, 'Using clever texturing techniques, great effects like the fire can be created. These textures are mapped onto grids or spheres, and then animated to give the effect of the fire moving.'

Scavenger 4 has only been in development for five months and is already very near completion. There is a Mega CD version planned, with other formats yet to be confirmed.

But doubts have already been expressed as to whether Psygnosis can back up these impressive rendered visuals with any real gameplay. Will it just be 'another' *Microcosm*? Richard reckons not – 'With *Scavenger 4* most of the code was written for gameplay, with *Microcosm* it was written to see if it was possible!'

Find out more in our review of *Scavenger 4* next issue. **E**

'Most of the code for *Scavenger* was written for gameplay, with *Microcosm* it was written to see if it was possible'



The elite Scavenger 4 unit is being ordered to head for the planet Calhinor. Each and every planet has its own theme and style

Credits

Lead Programmer: GP Ken Everett
Programmer: Rob Smith
Programmer: Zafar Qamar
Programmer: Oli Wright
Programmer: Mark Hula
Lead Artist: Paul Franklin
Intro Sequence: L Carus-Westcott
Music: Chris Nicholls
Original Concept: Richard Browne

Journeyman Project

Journeyman, a bizarre time travel game, is destined to hit the UK any day now. **Edge** reports

Format: **Mac CD-ROM**
Publisher: **Gametek**
Developer: **Presto Studios**
Release date: **30/11/93**
Size: **1 CD**
Origin: **US**

If being thrown into a completely alien infested world is your idea of fun, then *The Journeyman Project* from American design team Presto Studios could be just what you're looking for.

You are a member of the Temporal Protectorate – an elite group of agents – and it's your job to safeguard history from sabotage. This bizarre task has been made all the more difficult by some scoundrel travelling back in time and in doing so, perverting the course of history.

So it's now up to you to jump back in time and prevent this corruption from ever happening. Considering you start in the year 2318, it's a task that could take a long, long time.

Your Journeyman antics take you to worlds set both in the past and the future. Boasting gorgeously presented photorealistic 3D worlds, and over 30 minutes of video footage, *The Journeyman Project* is definitely a great looker. And thankfully this beauty is not only screen deep.

It has a branching storyline as complex as a feature film and you do your tasks in any order. Add to that the fact that there's several ways to do each task, and you'll begin to understand why this game caused such a stir in the States. E



Unarmed time travel can be a dangerous pastime. This happy looking fellow could help you in your task, but a million pounds says he won't



You're given total freedom within this 3D environment (main). Digitised footage (insert) adds another degree of believability to *Journeyman*



Helpful information windows can be accessed at any time during the game

THE ONLY PLACE ON EARTH FOR GAMES THIS CHRISTMAS.

(COME ALL YE FAITHFUL)

LET US ENTERTAIN YOU!

SUPER NINTENDO ENTERTAINMENT SYSTEM



Home Alone Was £44.99	£19.99
The Hunt for Red October Was £49.99	£19.99
Super Mario All Stars	£49.99
Streetfighter II Turbo	£59.99
SN Propad Was £17.99	£12.99

YES! IT'S NES!

Nintendo®



James Bond Jr Was £39.99	£9.99
Gremlins 2 - The New Batch Was £19.99	£9.99
Jurassic Park	£29.99

YOUR KIND OF GAME BOYZ!

GAME BOY



Home Alone 2 - Lost in New York Was £24.99	£9.99
Sneaky Snakes Was £24.99	£9.99
Mortal Kombat	£29.99
Logic 3 GB Power Adaptor Was £7.99	£6.99

HASTA LA VISTA AMIGA AMIGOS!

AMIGA



Goal Was £30.99	£9.99
Lemmings Was £25.99	£9.99
Zool 2, Get Zool 1 FREE	£25.99
Jurassic Park	£25.99
Super Pro Zipstik Was £14.99	£9.99

PLUS CD32 hardware and software in store now!

BUDGET ZONE

Super value range of budget titles for Amiga, PC and Atari.

Great gift ideas from Future Zone:
LCD'S, T-SHIRTS, CUDDLY TOYS, GIFT VOUCHERS

Previous prices quoted apply in all our stores open for at least 28 days in the previous 6 months. All offers are available while stocks last. All prices and details correct at time of going to press, subject to change without notice, offer prices valid until 24/12/93.

ENOUGH GAMES TO DRIVE YOU MEGA MAD!

SEGA MEGA DRIVE



Mickey & Donald World of Illusion Was £39.99	£19.99
Road Rash II Was £39.99	£19.99
Streetfighter II Special Championship Edition	£59.99
F.I.F.A International Soccer	£44.99
SG Propad Was £17.99	£12.99

Sega Mega CD and games available.

BE MASTER OF THE GAME!

Master System II



Tazmania Was £29.99 Was £19.99	£14.99
Xenon 2 Was £19.99	£6.99
Speedball Was £19.99	£6.99
Sonic Chaos	£29.99

GET INTO OUR GEAR NOW!

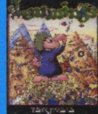
GAME GEAR



Lemmings Was £27.99	£14.99
Ariel The Little Mermaid Was £29.99	£14.99
Robocop v's Terminator	£29.99
Logic 3 GG Car Adaptor Was £6.99	£5.99

EASY PC!

PC COMPATIBLE



Lemmings Was £34.99	£9.99
Shuttle Was £39.99	£9.99
Jurassic Park	£34.99
Premier Manager 2	£34.99
Logic 3 Speedmouse Was £19.99	£14.99
Logic 3 Mousemat Was £4.99	£2.99

Future ZONE
THE LATEST IN COMPUTER & VIDEO GAMES

Future Zone is heaven on earth for computer and video games lovers. We've got all the latest in hardware, games and accessories with all the top names. There's even a Test Zone where you can try out the games before you buy. So make sure you zap down to Future Zone this Christmas because there's no place quite like it in the whole world.

This Christmas don't be a loser, get your copy of our Magazog - the totally crucial Christmas brochure, sponsored by Konami. Join our exclusive Zone Club and enjoy some wicked exclusive offers.

FUTURE ZONE

We're Everywhere!

We've got no less than 45 excellent stores nationwide. To find out where your nearest store is just give this number a buzz.

0891 332288



Photography: **Stuwart Whale**

Peter Molyneux: some might say he looks at the world through rose-tinted glasses...

Funtime at Bullfrog

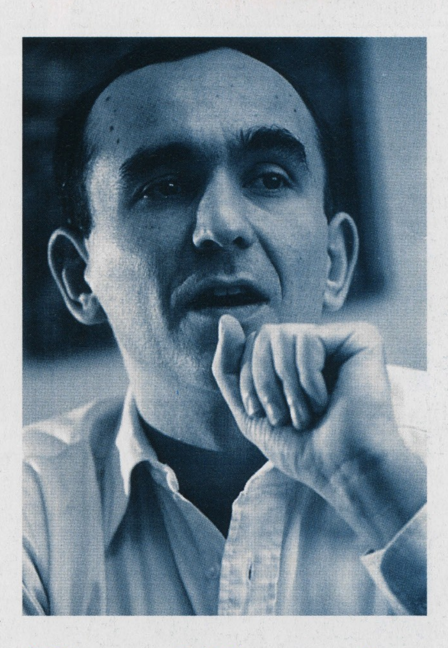
Bullfrog's Peter Molyneux is the man behind some of the most successful videogames ever. **Edge** reports on his new projects, *Theme Park*, *Creation* and *Magic Carpet*

For the past seven years Bullfrog have been at the forefront of British software development. The Guildford based company has been responsible for some of the most ingenious and intricately designed software titles to date. Past efforts, *Populous*, *Powermonger* and the more recent hit *Syndicate* prove this. Indeed, you'd be hard pushed to think of a badly written game brandishing the Bullfrog logo.

Peter Molyneux, the eccentric and successful founder of Bullfrog, is hoping for continued success with three new titles planned for release early next year: *Creation*, *Theme Park* and *Magic Carpet*, and only one of the three is even remotely 'god' based.

Although Bullfrog's games contain huge complexities, it's the ease with which those complexities are made accessible to the player that makes the games so successful. Peter explains, 'Our philosophy is to create games not just for people who play loads of games, but for those people who don't normally play at all. I mean, people can't really associate with a hedgehog running around a screen. We've used this philosophy with *Magic Carpet*, and all our games in fact.'

Magic Carpet has a distinct Arabian



'Our philosophy is to create games not just for people who play loads of games, but for those who don't normally play at all'

Peter Molyneux,
MD, Bullfrog Productions

Continued next page





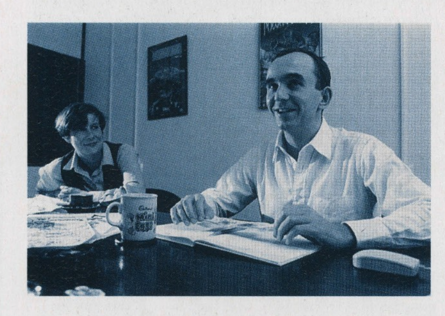








***Magic Carpet* thrusts you into a completely three dimensional Arabian Knights world. Unlike some games, Bullfrog have given you total freedom within this environment. The system used to generate these landscapes is a hybrid of the system used in *Populous*. Each landscape is individual and is generated by randomly adjusting its parameters. The data and variables for each landscape are compressed into just 56 bytes**



'*Magic Carpet* is sort of like a flight simulator but with any of the hassle of flight simulator controls...'

Knights look and feel. The story goes that you have fallen in love with a prince or princess (you can choose), and a Sultan has set you several tasks. Your character is sent down into a dungeon full of magical treasures, and he picks two to help him on his quest: a genie and a magic carpet.

According to Peter, '*Magic Carpet* is sort of like a flight simulator, but without any of the hassle of flight simulator controls, and it's set in an environment that people can easily understand.'

In creating the landscape, the computer is generating a completely fractal world. 'What we wanted to do was to create a flexible and easy to use environment in which you have total freedom', Peter says. Indeed, the world is so accessible that is possible to fly anywhere you want. You can fly high into the sky, skim the surface of the ocean or even fly through towering canyons.

The landscapes look incredibly realistic and the attention to detail is quite astonishing: even the sea moves up and down the shore. Peter explained 'What we've tried to do is make this world as real as possible, because nowadays it's the little things that make all the difference. So for example, everything in the world has shadows – the birds, the trees, the dragons, the carpet, everything. As time passes and the sun comes down, so all the shadows move accordingly. I don't think this has been done on the PC before.

'The sea level follows all the moon patterns, so the tide will actually move up and down according to the time of day it is. This obviously hasn't got a huge relevance to the game but it shows the kind of world we've created.'

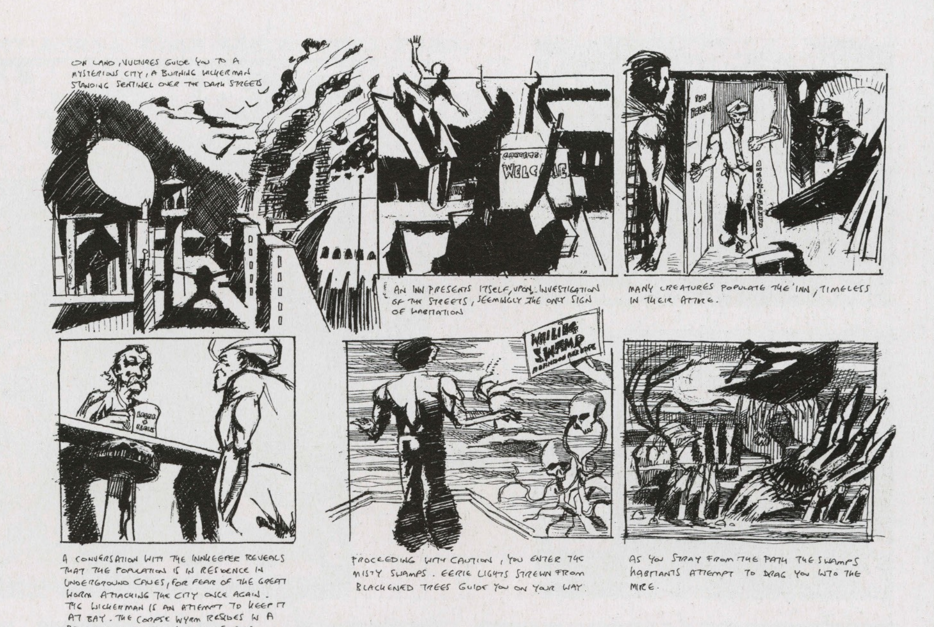
Glenn Corpes is the main programmer behind Magic Carpet and he was responsible for getting the 3D world to look and move as it does. Glenn says, 'I was responsible for the 3D routine. It took around two months to generate a landscape and another three months to get things like trees moving around properly on that landscape. Some games that look

Continued

similar have used a technique called Voxen Space. But this technique takes up far too much memory.

'A similar map created via Voxen Space would have taken upto two megs of memory. One of my maps only takes up 256K.' Glenn – who has been with Bullfrog since the start, and worked on projects like *Populous* and *Power Monger* – is happy with his efforts so far, but feels he's now found an even better way of doing it.

According to Peter, 'The landscape is constructed purely of polygons. After we place down the polygons, we texture map them and then add Gouraud shading on top of that. The next stage is to depthcue the whole lot and then finally put the fog down. The reason behind the fog is twofold. Firstly it obviously looks quite nice, and secondly it means that we don't have to draw too far.'



As with all the best games, *Magic Carpet* started life on the drawing board. This extract from the story explains how your character originally managed to get hold of the magic carpet

Although the landscapes look very impressive, especially in the hi-res version, the in-game characters – at this stage at least – look rather crude. Some high powered graphics equipment is needed to improve them, and sure enough a Silicon Graphics workstation is Guildford bound.

There won't be a problem in translating the graphics as everything in *Magic Carpet* has already been created as a 3D model, and all the frames can be transported to and from the Silicon Graphics workstations with relative ease.

'We can bring the meshes directly over from the Silicon Graphics stations and render them in real time directly into our game,' Peter says. 'Rendering objects that are created on things like Silicon Graphics machines will also be a bit of an achievement. As Peter explains, 'The animation for all the main characters will be done using a special suit that is connected up to the Silicon Graphics station. The suit has special sensors in all the major joints so whatever movements you make in the suit are fed directly into the workstation. This will hopefully produce perfect animation.'



Russell Shaw, Bullfrog's only sound man, taking time out. Russell had to digitise the sound from a real fairground for *Theme Park*

1,000 frames worth of perfect animation, to be precise. The team are hoping to give the main character in the final game about that many frames. A lot of time is being spent on getting the final product as realistic as possible, and according to Peter, 'The more realism you have, the more realism people will expect. Two frames of animation for something is not going to be acceptable any more. These aren't film quality graphics, but they're closer to film quality than we've had for some time – and I think it should move as well as it looks.'

As well as looking great, *Magic Carpet* is also very easy to just pick up and play. The team have made it so you can't actually physically crash the carpet. What they want is anyone to come along and pick up the mouse and start flying straight away. And **Edge** can testify that, so far at least, they've succeeded in doing this.

Peter stresses, 'You won't have to go to flight school for two years before you get started with *Magic Carpet*'.

Another factor that the team are working hard on is the continuity. In *Syndicate*, if something died, it stayed where it fell. The same applies in *Magic Carpet*. If you shoot a dragon down with a spell, it lies on the floor just where it was shot. You can fly around for hours and the dragon's skeleton will still be lying where it was shot down. Peter says, 'It's something that really, really annoys me. I really feel strongly about games where the bodies just disappear before your eyes.'



Having worked on all of Bullfrog's projects, Glenn Corpes is happy with the 3D routine he's achieved in *Creation* and *Magic Carpet*

Adding further to the believability of the whole product, *Magic Carpet* will have a true 3D option. Donning a pair of plastic red and green glasses, Peter shows off how the 3D will work.

But these 3D glasses will not be supplied with the game. 'I would supply simple 3D glasses with the PC game, but

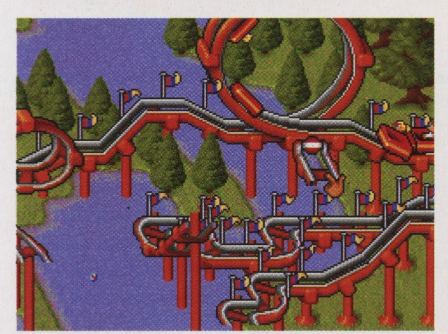
Continued next page

prescreen

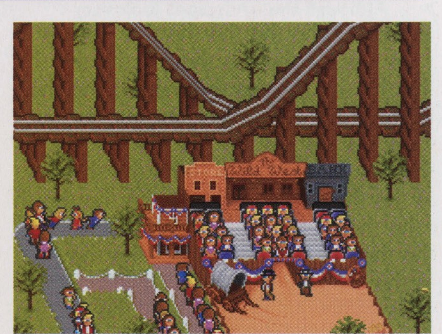












***Theme Park* may 'look' like a simple game, but what you can't see is all the things going on in the background. The 'people' tables are constantly updating. Each and every person that enters your park will form their own opinion of it – if the little people think your rides are boring, simply crank up the speed of the ride. The people will love it, but the faster it goes, the sooner it breaks down. There's even an option to design your own rides**



'Beneath the simple exterior of *Theme Park* lurks a comprehensive business simulator'

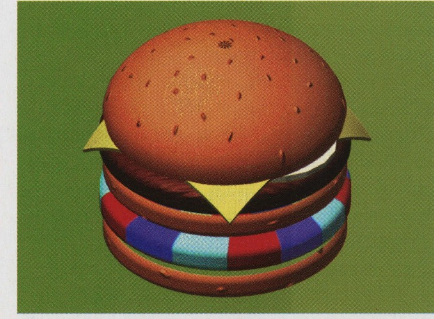
I'm afraid of the health scare', Peter says. 'I can just see it now, 'That Bullfrog game blinded my sister's, boyfriend's dog.' So we'll just have to wait and see.'

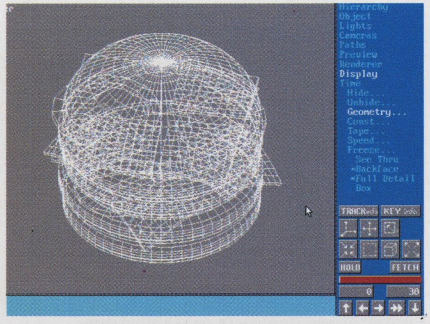
A 3DO version is also in development. The 3D effect in this version will be better appreciated because of the machine's custom built 3D glasses. High-quality LCD glasses are just one of the many peripheral devices planned for the 3DO – they should be out sometime next year. *Magic Carpet* is certain to be a big 3DO hit.

Russell Shaw, Bullfrog's sound man, has been busily working on the sound effects and music that you'll hear in the final game. Russell has also been working on a 'phoneme generator' to simulate speech. He's hoping that all the characters will be able to speak without sounding stupid.

Magic Carpet will just contain speech,

Continued





All the graphics in *Theme Park* have been constructed using *3D Studio*, surprising considering their simplistic appearance. Bullfrog are hoping to render the entire park in 3D by using these meshes

and there'll be no written text in the game at all. Russell pointed out that it's proving tough to do at the moment because he's trying to get the generator to understand French and German for those markets.

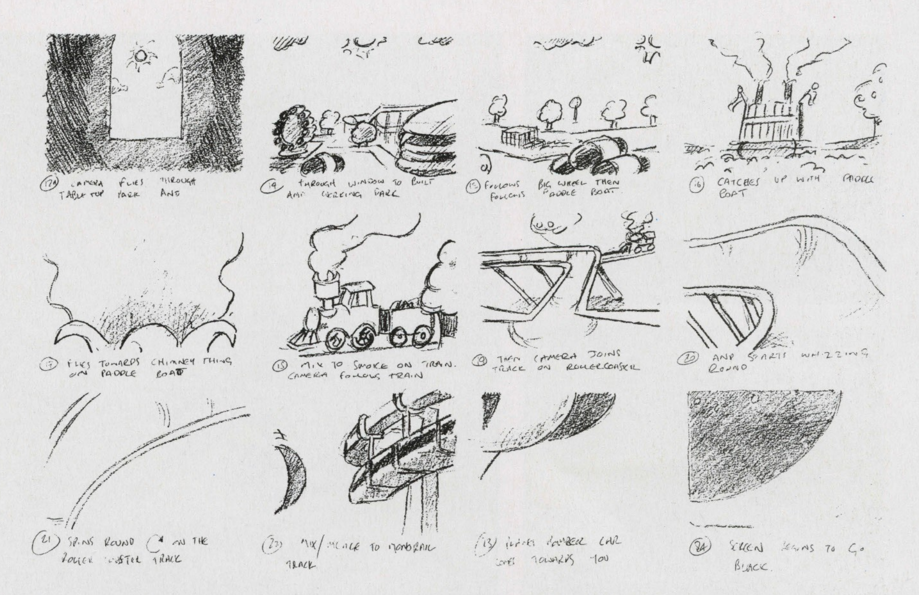
Although *Magic Carpet* is now only 60% finished, the team hope to get the product out for the first quarter of '94.

Bullfrog are looking at an earlier release for their other game – *Theme Park*. The idea behind the game is simply this: you manage and build your own theme park to compete with 40 other theme parks in the world.

Peter outlines the inspiration behind the game, 'When I first started writing software back in '83, the first game I wrote was a business simulator. After I had made the game I was so convinced that it was going to make me my first million. I rang up the local post office and warned them that they had better get more postmen on the job to cope with all the extra mail I was going to receive. As I looked round the small office I was working in, it suddenly dawned on me that my post box in the door wasn't big enough to cope with the extra mail, so I sawed a big hole in the bottom of it.

'I took an advert out in the local paper and had calculated that Thursday was the day that all the mail would arrive. I sat down by the door at 7.30am, knowing that the mail usually came at 8.00am, and waited. I then heard some footsteps approaching the door and thought at the time that it was a bit strange that it was only one pair of footsteps, I thought maybe they've come to warn me that a huge truck was on its way to dump all my mail.

'Just then, two envelopes came fluttering through the door. Sure enough they were orders for my game, but they were the only orders I ever received. And to this day, I'm utterly, utterly convinced that one of those orders was from my mother. Everyone who played that game really liked it and so did I. I've always felt that that business game was well worth pursuing, and so I came up with the idea of *Theme Park*.'



If you thought that ***Theme Park*** doesn't need a story board, you'd be right. This story board isn't for the actual game, it's being used to outline the game's stunning introduction sequence

Beneath the simple looking exterior of *Theme Park* beats the heart of a comprehensive business simulator. Again, all the complexities have been made easily accessible to the player, so building a theme park couldn't be easier: just pick an icon and then place it on the barren field that you're given to start with. But probably the most innovative thing about *Theme Park* is the little people that come into the park.

Each and every one of them has its own individual personality. It's like an invasion of the 'Little Computer People'. According to Peter, **Donald Mitchy**, the father of artificial intelligence, and 'without doubt the leading light in artificial intelligence', came to see *Theme Park* and said that he'd never seen anything so incredible. And it's easy to see why.

Each little person has its own identity – they all have individual hunger, individual boredom, individual thirst, they get happy and they can become sad. They can even appreciate the design of your park.

Each little person takes up around 200 bytes of memory. A structure holds all the variables for each person, and these variables are constantly updated. The little people in *Populous* contained around 15 lines of information. Peter displayed the code for one person in *Theme Park*, it was at least ten times longer.

'Although the people are very complex in structure they only take up around 3% of the total game logic, because of the way we've written it. We've used time slicing and event-driven intelligences, which means that we only address the character's variables exactly when we need to. But it's the way we've processed them that's the clever part.'

Theme Park can be played in one of three ways: Sand Box mode – which is

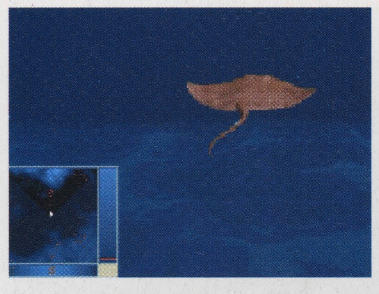
Continued next page

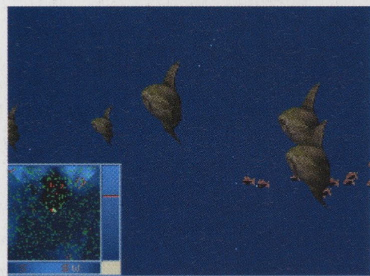


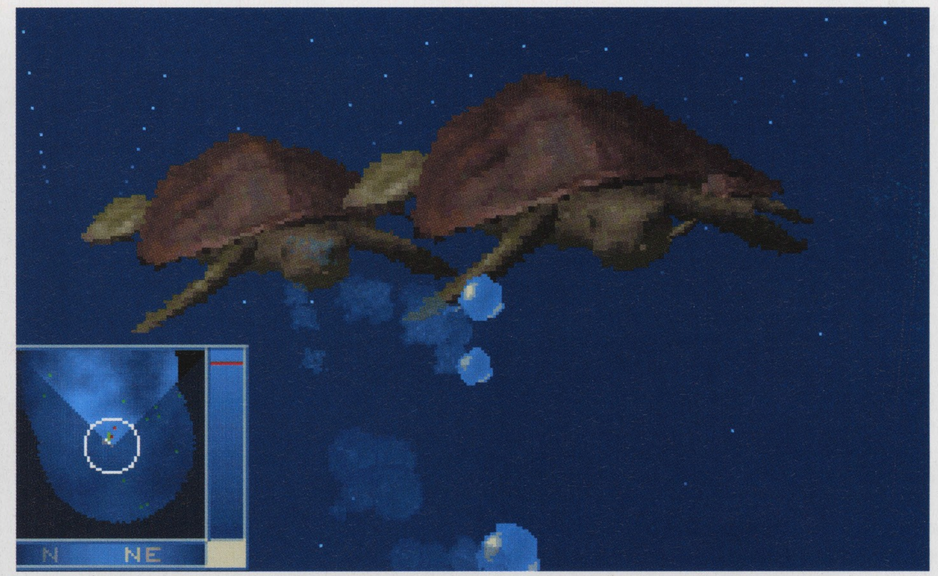
Sketches were used to decide on how the little people would look in each country. This figure can be found in the Japanese park

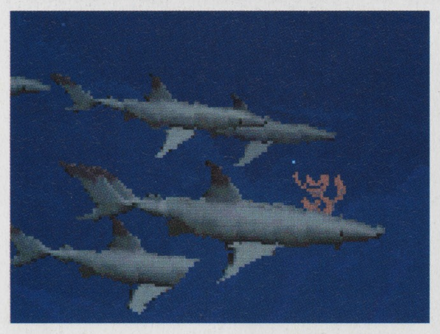


Phil Jones, one of the main programmers behind ***Creation***. It took him three months to get the desired underwater effect

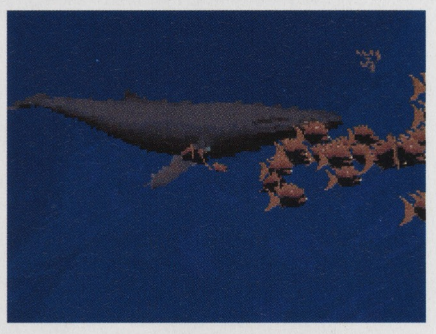




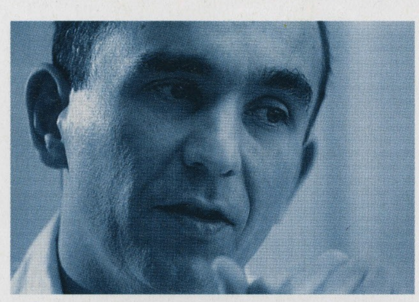








***Creation* is Bullfrog's most ambitious effort yet. Back in '91 it started life as another 'god' game. But two years on the team have decided to take the 3D routine from *Magic Carpet* and throw the whole thing underwater. Working from library pictures, Phil Jones has concentrated on animating certain blocks to give that underwater feeling. The sun diffracting through the water is a nice touch: the further down you go, the darker the water gets**



Continued

'In *Creation*, by strapping devices to your fish, you can use them to attack the other bases'

based on just building a successful theme park with a little strategy thrown in; half Sand Box, half pure strategy; and lastly a full blown business simulator.

In the business simulator you can even alter the amount of salt that goes on the chips sold in the park. The more thirsty the people are, the more they will drink, the more they drink, the more money you make – simple but yet so clever.

Theme Park has been enjoyably researched – the team travelled around the world visiting the best theme parks – and notes were made of the rides and the atmosphere certain parks had.

The sound was sampled from real theme parks and some traditional fairground tunes will also be heard in the final version. Even the sound effects in the game are event driven. For example, the little people scream piercingly as they go round a loop on the rollercoaster.

Peter explains, 'We've tried to make everything as realistic as possible, hence the sound. You should also be able to look at the screen and know exactly what's going on. If a little kid is crying it's for a reason. If your workers are not working diligently enough, again it's for a reason — maybe they want a payrise or something.'

Another sound feature that the team hope to get into the game is a novel one – you'll be able to place a microphone on anyone in the park and listen in to their conversations. You'll be able to follow that person around and hear exactly what the people think of your park. Peter is even thinking of putting in a similar camera option, so you could look through the person's eyes with a 3D perspective.

'All the graphics – although they look simple – have been constructed out of meshes, just as they have been in *Magic Carpet*. It's all been constructed using a modeller rather than just a normal graphics painting package.

'So we've already got all these meshes, and we can then bring them in and render the whole park in real time. But to store all the meshes as well as all the graphics

would take up a lot of memory. So we may do it on the 3DO version or the PC CD version only.'

Theme Park is all set for a release early next year, and the Bullfrog team have already started coding what Peter describes as 'the most exciting topic we're working on' – and that is *Creation*.

Some of you may well recognise the name. It was an idea that started life way back in '91, and the idea then was to create different lifeforms to survive in different locations. The Bullfrog team must have shelved that idea, as this *Creation* has only been in development for a couple of months and is more than a little different.

Visually, *Creation* looks just like an underwater version of *Magic Carpet* – not surprising as it's using a very similar graphic system. **Phil Jones** heads the *Creation* development team, and he worked particularly hard on getting the whole landscape to look like it's underwater.

Phil has had to work from library pictures to get the feel and the mood of scenery just right. 'I've also been working on getting the 'shimmering' effect just right. This has been done by animating the blocks, and there's also an additional shimmering effect which is down to the way the individual blocks are Gouraud shaded. I've also put in a starfield to give the feeling of motion.'

A slightly different approach has been employed to give the surface of the ocean a 'rugged' and 'eroded' look. After the usual texture maps were added, an extra layer of bump maps was added, which basically adds indentations to the surface to fully complete the underwater effect.

The idea behind the game isn't a million miles away from the original plot. Peter says 'It's all set in the future, and it uses a similar method to *Syndicate* in the way you can control things. You're inside an underwater base with breeding tanks, and the idea is to defend your base against other attacking bases.

'You can catch fish and bring them back to base and start breeding them. You can then – by strapping certain devices to their backs – control the fish you've created to attack the other bases.'

Phil continued, 'We have around ten breeds of fish, and we're looking to get more in there. They're all rendered in 3D and take up between 80 and 120K.'

Although *Creation* is at a very early stage, it's looking very impressive. Peter and his team are even currently looking into the possibility of interlinking both *Creation* and *Magic Carpet*.



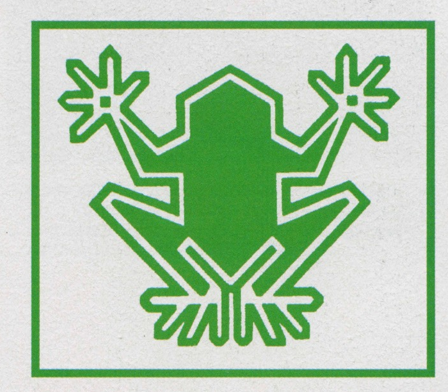
The Bullfrog team: (Top row, from the left) Mark Webley, Russell Shaw, Phil Jones, Glen Corpes, Peter Molyneux, Paul Mclaughlin, Guy Simmons. (Bottom row, from the left) James Robertson, Dennis Hassabis, Mark Lamport, and – last but not least – Fin Mcgechie

Peter explains 'If you're playing *Magic Carpet* you will be able to jump off the carpet and into the ocean, the computer will then sense whether you have *Creation* on your hard disk and plunge you straight into that, based totally on the world you were just flying around.'

Creation, *Theme Park* and *Magic Carpet* will all be multiplayer compatible. Up to eight players can tackle missions together in *Magic Carpet*, build the most successful park in *Theme Park* or attack each other in *Creation*. Peter believes this is the way forward with games. 'Everyone is going on about CD being the real revolution, but it's going to be nothing compared with what you can do with multiplayer games. In the States, and especially in Japan, they're really pioneering the use of multiplayer games.

'They have whole towns playing games. This multiplayer idea is not going to go away, it's going to get more prevalent. I just want to make sure all our games will be compatible now.'

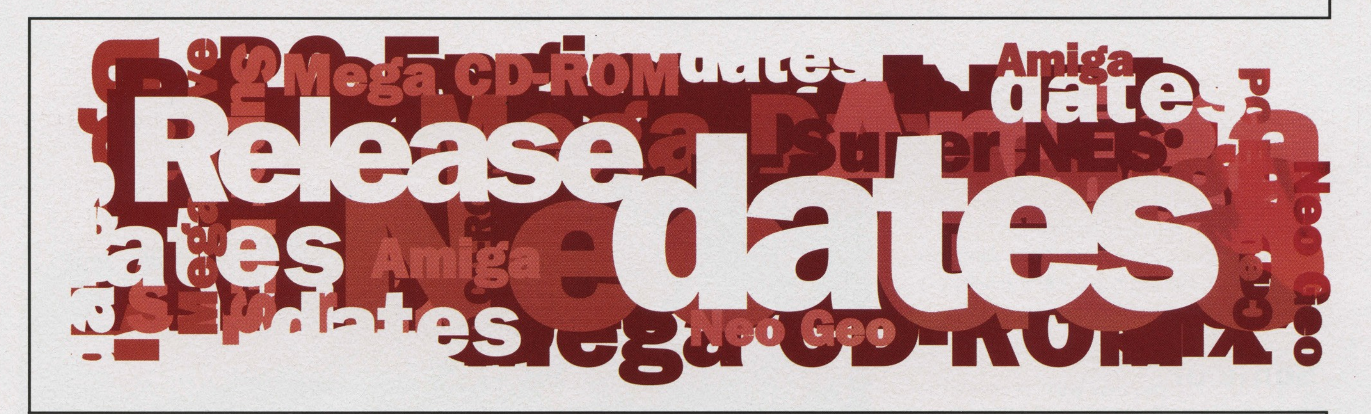
Whether these three games will be good enough to have 'whole towns' playing them remains to be seen, but based on what **Edge** has already seen, Bullfrog can certainly look forward to next year with some confidence.



Credits

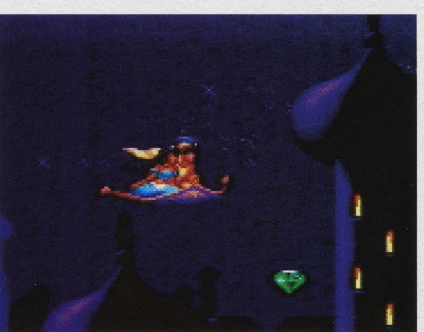
Programmer:	Peter Molyneux
Programmer:	Glenn Corpes
Programmer:	James Robertson
Programmer:	Phil Jones
Programmer:	Dennis Hassabis
Programmer:	Mark Webley
Programmer:	Guy Simmons
Programmer:	Mark Lamport
Programmer:	Mark Huntley
Graphics:	Chris Hill
Graphics:	Fin Mcgechie
Graphics:	Paul Mclaughlin
Graphics:	Andy Sandham
Sound:	Russell Shaw

Cybermorph **Dragonsphere** Xmas Lemmings **Mr Nutz** Total Eclipse **Kether** TMNT Tournament **Cool Spot** Zool **Aliens Vs Predator** Delta V **Raiden** MegaRace **Castlevania** Microcosm **Plok** Virtua Racing **Marble Madness** Universe **Star Trek** Human Grand Prix **Dragon's Lair** Twisted



Release dates

Edge's unique multiformat release schedule, covering the entire world of videogaming



Aladdin **on the SNES (Testscreen p76). If only Capcom could sort out their difficulty settings, they'd have the perfect platformer...**

Zool **on the Mega Drive: cleverly marketed, brilliantly hyped, and totally overrated. No doubt it'll sell bucketloads on the 'Drive**

E - Early, M - Middle, L - Late

Date	Game Title	Type	Publisher	Country
Super NES				
- December	Cool Spot	platform	Virgin	UK
E December	Lamborghini	racing	Titus	UK
1 December	FF Mystic Quest	RPG	Square Soft	UK
1 December	Plok	platform	Trade West	UK
1 December	**Aladdin**	**platform**	**Capcom**	**UK**
1 December	FF Mystic Quest	RPG	Square Soft	UK
02 December	Plok	platform	Nintendo	UK
03 December	TMNT Tournament	combat	Japan	UK
17 December	Rockman X	platform	Capcom	Japan
18 December	Dragon Quest I.II	RPG	Enix	Japan
- December	Pro Baseball '94	sports	Epic/Sony	Japan
- December	R-Type III	shooter	Irem	Japan
12 December	Romancing Saga 2	RPG	Square Soft	Japan
- December	Human Grand Prix	racing	Human	Japan
- December	Ganbare Goemon 2	adventure	Konami	Japan
- December	Art Of Fighting	combat	SNK	Japan
- December	Dragon Ball Z 2	combat	Bandai	Japan
- December	Super F1 Hero 2	racing	Varie	Japan
22 December	Top Racer 2	racing	Kemco	Japan
- December	Lethal Enforcers	light gun	Konami	Japan
- December	Tecmo Super Bowl	sports	Tecmo	US
- December	Rushing Beat	combat	Jaleco	Japan
- December	Super J-League Soccer	sports	Jaleco	Japan
- December	Ranma 1/2	combat	Ocean	UK
- December	Dennis	platform	Ocean	UK
- December	Mr Nutz	platform	Ocean	UK
- January	Young Merlin	adventure	Virgin	UK
- January	Rainbow Bell Adventure	platform	Konami	Japan
- January	Rockman Soccer	adventure	Virgin	UK
- February	Muhammad Ali	sports	Virgin	UK
Mega Drive/Mega CD				
3 December	TMNT Fighters	combat	Konami	UK
10 December	Lethal Enforcers	light gun	Konami	UK
10 December	Virtual Pinball	simulation	Electronic Arts	UK
10 December	**Zool**	**platform**	**Electronic Arts**	**UK**
14 December	James Pond 3	platform	Electronic Arts	UK
14 December	Lotus II – RECS	racing	Electronic Arts	UK
17 December	Blades Of Vengeance	combat	Electronic Arts	UK
- December	Fantasy Star IV	RPG	Sega	Japan
- December	F1 Circus CD	racing	Nihon Bussan	Japan

NOTE: Publisher's release schedules are as reliable as a 38-year-old Robin Reliant on a damp morning

E - Early, M - Middle, L - Late

Mega Drive/Mega CD continued

Date	Game Title	Type	Publisher	Country
- December	Pop 'n' Land	RPG	Sega	Japan
- December	Microcosm (CD)	action	Psygnosis	UK
- December	FIFA Soccer	sport	Electronic Arts	UK
23 December	F117 Night Storm	simulation	Electronic Arts	UK
24 December	BW College Football	sports	Electronic Arts	UK
- December	Winter Olympics	sports	US Gold	UK
- December	Bubba 'n' Stix	action	Core Design	UK
- December	TMNT Tournament	combat	Konami	UK
14 January	NHL Hockey '94	sports	Electronic Arts	UK
14 January	Power Monger	strategy	Electronic Arts	UK
- January	Gunship	simulation	US Gold	UK
- Undecided	Castlevania	platform	Konami	UK

PC Engine/Super CD-ROM² (H=HuCard)

Date	Game Title	Type	Publisher	Country
10 December	Bomberman '94 (H)	action	Hudson Soft	Japan
17 December	Martial Champions	combat	Konami	Japan
18 December	Fatal Fury 2 (18M CD)	combat	Hudson Soft	Japan
22 December	Ys IV	RPG	Hudson Soft	Japan
- December	Super Darius II	shooter	NEC Avenue	Japan
- Undecided	Marble Madness (H)	puzzle	Tengen	Japan
- Undecided	Super Fantasy Zone	shooter	NEC Avenue	Japan
- Undecided	Strider (CD-ROM²)	platform	NEC Avenue	Japan
- Undecided	Galaxy Force II	shooter	NEC Avenue	Japan
- Undecided	Mega Twins	action	NEC Avenue	Japan
- Undecided	Hellfire (H)	shooter	NEC Avenue	Japan
- Undecided	N Warriors (CD-ROM²)	action	NEC Avenue	Japan
- Undecided	Gods	action	NEC Avenue	Japan
- January	Emerald Dragon	RPG	NEC Avenue	Japan

Neo Geo

Date	Game Title	Type	Publisher	Country
- December	Top Hunter	shooter	SNK	UK/Jap
- January	Art Of Fighting 2	combat	SNK	UK/Jap
- Undecided	Magician Lord 2	action	Alpha	UK/Jap
- Undecided	Reactor	combat	SNK	UK/Jap
- Undecided	Samurai Shodown 2	combat	SNK	UK/Jap

PC

Date	Game Title	Type	Publisher	Country
29 November	Over The Edge	action	US Gold	UK
3 December	Victory At Sea	simulation	Electronic Arts	UK
7 December	Ultima 8	RPG	Origin	UK
- December	Star Trek (CD)	adventure	Interplay	UK
- December	Armoured Fist	simulation	US Gold	UK
- December	Delta V	action	US Gold	UK
- December	Winter Olympics	sports	US Gold	UK
- December	Syndicate Data Disk	action	Electronic Arts	UK
- December	Super Strike Command	simulation	Electronic Arts	UK
- December	Master Of Orion	adventure	Microprose	UK
- December	Xmas Lemmings	strategy	Psygnosis	UK
- December	Ryder Cup	sports	Ocean	UK
- January	Burnin' Rubber	racing	Ocean	UK
- January	Pacific strike	simulation	Electronic Arts	UK
- January	Wolf Pack (CD Rom)	action	US Gold	UK
- January	Armoured Fist	action	US Gold	UK
- January	The Dig	strategy	US Gold	UK
- January	Tie Fighter	action	US Gold	UK
- January	Evolution: Lost In Time	adventure	US Gold	UK
- January	Raiden	shooter	US Gold	UK
- January	Al-Quadim	action	US Gold	UK
- January	Starlord	strategy	Microprose	UK
- January	Star Trek 25th (CD)	adventure	Interplay	UK
- January	Ten Year Anniversary	compilation	Interplay	UK
- January	Bloodnet (CD)	action	Microprose	UK
- February	Dragonsphere (CD)	adventure	Microprose	UK

Amiga

Date	Game Title	Type	Publisher	Country
29 November	Star Trek (A1200)	adventure	Interplay	UK
1 December	Cool Spot	platform	Virgin	UK
- December	Darkmere	RPG	Core Design	UK
- December	Bubba 'n' Stix	action	Core Design	UK
- December	Ryder Cup (A500)	sports	Ocean	UK
- December	Winter Olympics	sports	US Gold	UK
- December	Evolution: Lost In Time	adventure	US Gold	UK
- December	Raiden	shooter	US Gold	UK
- December	Castles II (CD32)	action	Interplay	UK
- December	Assassin – Special Ed	action	Team 17	UK
- December	Microcosm (CD32)	action	Psygnosis	UK
- December	Ryder Cup (CD32)	sports	Ocean	UK
- December	Ryder Cup (A1200)	sports	Ocean	UK
- January	Mr Nutz (A1200)	action	Ocean	UK
- January	TFX (CD32)	simulation	Ocean	UK
- January	Dark Stone	adventure	Core Design	UK
- January	Universe	adventure	Core Design	UK
- January	Heimdall 2	action	Core Design	UK

CD-i

Date	Game Title	Type	Publisher	Country
- December	Caesar's Boxing	sports	Philips	UK
- December	Kether	action	Philips	UK
- Undecided	Microcosm	shooter	Philips	UK

3DO

Date	Game Title	Type	Publisher	Country
15 November	Total Eclipse	shooter	Crys Dynamics	US
19 November	John Madden 3DO	sports	Electronic Arts	US
- November	Twisted	game show	Electronic Arts	US
- November	Zombie adventure	adventure	Electronic Arts	US
- November	Who Shot J Rock?	shooter	A Laser Games	US
- November	Dragon's Lair	action	S Toolworks	US
- December	CPU Bach	music	Microprose	US
- December	MegaRace	racing	S Toolworks	US
- December	Peter Pan	action	Electronic Arts	US
- December	Super W Commander	simulation	Origin	US
- January	Shadow Caster	adventure	Origin	US
- February	Out Of This World	action	Interplay	US
- February	Battle Chess	simulation	Interplay	US

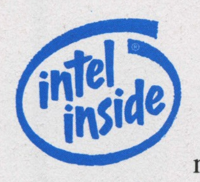
Jaguar

Date	Game Title	Type	Publisher	Country
E December	Cybermorph	shooter	Atari	UK
E December	Raiden	sports	Atari	UK
E December	Crescent Galaxy	action	Atari	UK
E Undecided	Evolution Dino Dudes	platform	Atari	UK
- January	Tempest 2000	shooter	Atari	UK
- January	Checkered Flag 2	racing	Atari	UK
- January	Alien Vs Predator	sports	Atari	UK
- January	Tiny Toon Adventures	platform	Atari	UK
- January	Club Drive	driving	Atari	UK

Magazines

Date	Game Title	Type	Publisher	Country
9 December	PC Gamer	PC	Future	UK
9 December	Super Play	SNES	Future	UK
9 December	Sega Power	Sega	Future	UK
9 December	Game Zone	Nintendo	Future	UK
16 December	Amiga Power	Amiga	Future	UK
16 December	GamesMaster	multiformat	Future	UK
23 December	TOTAL!	Nintendo	Future	UK
23 December	MEGA	Mega Drive	Future	UK
23 December	PC Format	PC	Future	UK
23 December	Sega Zone	Sega	Future	UK
23 December	**Edge** 5	multiformat	Future	UK

The affordable power source in

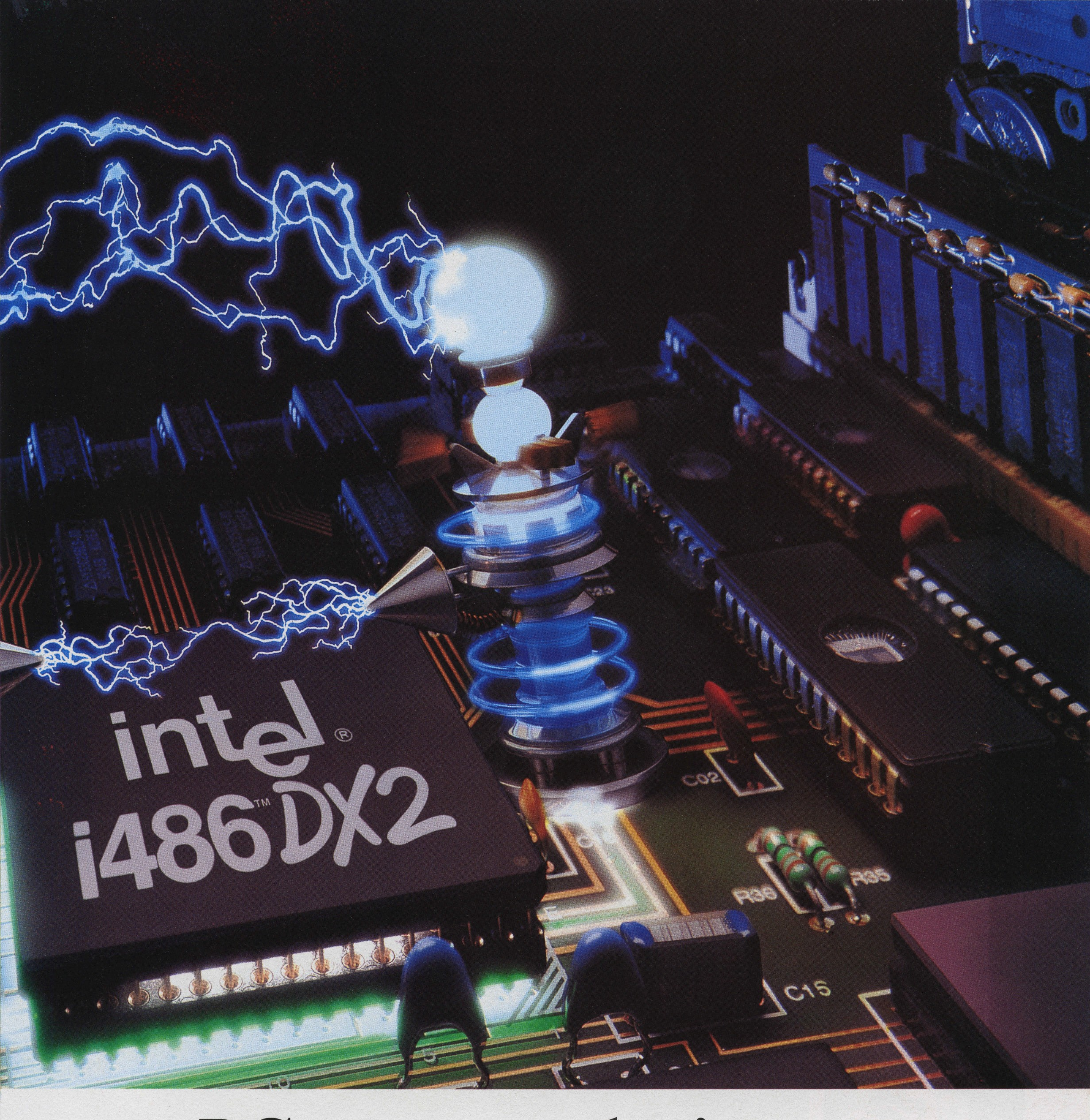


Today's user friendly software demands a lot of power. Power that Intel's i486 DX2 microprocessor can provide.

Whereas other systems slow down running 3D and enhanced graphics, the Intel i486 DX2 is able to cope with ease. By using Intel's latest speed doubling technology.

Of course, it guarantees compatibility, as all of today's most popular software is designed to run on Intel microprocessors. It also generates enough power

© 1993 Intel Corporation



your PC to run today's games.

to cope with the next generation of demanding software.

Performance, compatibility and room for the future - three powerful reasons to buy a PC with an Intel i486 DX2 inside.

For more information, simply post the coupon.

To: Intel Corporation, Customer Support Centre, Pipers Way, Swindon, Wilts, SN3 1RJ. Please send me further information on Intel i486 DX2 processors.

DX31

Name

Address

Postcode

Country

intel



Photography: **Peter Canning**

Hardcore engineering

Hardcore gamesplayers adore it, and the PC Engine continues to earn respect despite being almost six years old. **Edge** reflects on the technology, the games, and even the whispers of a 32bit Engine...

The PC Engine was launched in Japan on October 30th 1987. Next to the 8bit Famicom, which by this time had established itself in one out of four Japanese homes, it looked unbeatable. This was a hugely powerful machine, with software that wouldn't have looked out of place in an arcade. But it was HudsonSoft's *R-Type* which arrived in early '88, that sold the machine in large numbers. Few gamers could resist a coin-op perfect conversion of a cutting-edge game like this. The PC Engine probably represents the most significant jump in gaming power the console market has ever seen. This was one time when gaming power in the home most definitely caught up with technology in the arcades. And yet still only in 8bit.

It was perhaps this aspect that caused the most confusion, too. Next to the 8bit computers of the day like MSX, and in this country the C64 and Spectrum, the PC Engine's performance was in a different league – firmly in the 16bit league, even surpassing the performance of the best 16bit computers of the day like the Amiga. Conflicting reports of the machine's abilities in the UK computer press now seem absurd, given the level of interest the Japanese

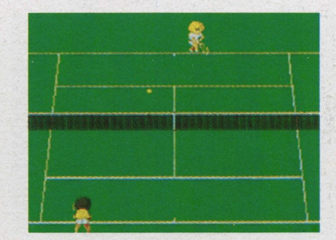
Continued next page

Name: **Devil Crash**
By: **Naxat (1990)**
Format: **4 Mbit HuCard**



Devil Crash is a hugely impressive pinball game for a number of reasons. The graphics are brilliant, the scrolling table works really well, and best of all it plays a really mean game. It's also more imaginative than *Pinball Dreams/Fantasies*.

Name: **World Court Tennis**
By: **Namco (1988)**
Format: **2 Mbit HuCard**



The first fourplayer tennis game for the Engine was very well received, and still plays better than almost any tennis game on any system. As a one or twoplayer game it's perhaps eclipsed by *Super Tennis* on the SNES, but it is still pretty great.

techview: PC Engine



The original white PC Engine and the newest addition to the stable, the Core Grafx II. To date, the PC Engine has sold 5.4 million systems in Japan alone...



The original CD-ROM system for the PC Engine – a stylish briefcase and CD player – was launched way back in 1988

Continued

market now sustains over here. But this was a time when the import market was in its infancy. In many ways the PC Engine set the ball rolling for the wealth of choice the consumer now enjoys.

Throughout the lifetime of the Engine NEC has consistently catered for the enthusiast. While Nintendo like to release one standard and sell it millions over, NEC take a more splintered approach – a wealth of upgrades and accessories for its games machines have always been the company's trademark. Who else would produce a cushion that vibrates to the sound of your games? And *nine* different versions of the PC Engine? What about CD-ROM? For years NEC were the pioneers of this medium in the console industry, having had a few years headstart on Sega and Fujitsu with its CD-ROM^2 add-on system for the standard Engine.

The PC Engine CD-ROM^2 system was a neat piece of kit – a stylish grey briefcase that positioned a small white NEC CD drive next to an Engine. Unfortunately the first operating system was hugely flawed, relying on the tiny 64K of buffer RAM in the briefcase interface. An upgraded operating system card included a supplementary 1.5 megabits – the Super System 3.0 card was released in 1991 roughly at the same time as the Super CD clip-on system and the all-in-one Duo. Immediately CD-ROM releases flourished as programmers found they could do so much more with the system. With this, the PC Engine CD-ROM system has become the most successful CD-ROM games system yet produced.

In order to further satisfy the fickle diet of the Japanese gamesplayer, NEC produced a laptop version of the PC Engine in 1990. Including a superb high quality LCD screen – one of the less impressive aspects of the GT – the PC Engine LT was the ultimate gadget for the gamer on the move, although it's possible to slot it into the old CD-ROM briefcase to play CD games, too. It was horrendously expensive when first released (approximately £500!), the LT can now be picked up for around ¥47,000 (£300). Which

Name: **Parodius**
By: **Konami (1991)**
Format: **8 Mbit HuCard**



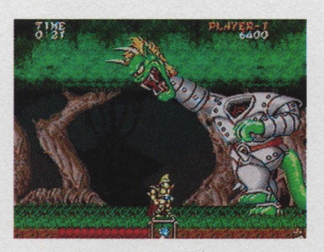
The scrolling shoot 'em up that was a success on the SNES appeared first on the PC Engine, and in many ways it makes more impressive use of the hardware. There's no slow down, the parallax scrolling is great and the use of colour is excellent.

Name: **PC Kid**
By: **HudsonSoft (1989)**
Format: **3 Mbit HuCard**



Sega has *Sonic.* Nintendo has *Mario.* And NEC has *PC Kid* (or Bonk as he's known in the US). But don't be fooled by the cacky graphic – it's the gameplay that counts and that's fabulous. It's also worth checking out *PC Kid 2* and *3.*

Name: **Ghouls 'n' Ghosts**
By: **NEC Avenue (1991)**
Format: **8 Mbit SG HuCard**



The best conversion of the coin-op you'll find. And still the best Super Grafx game out of the six available. What separates this from the Mega Drive version is the sprite colour and parallax backgrounds; gameplay is just as unforgiving as the coin-op.

Name: **Gradius II**
By: **Konami (1992)**
Format: **Super CD-ROM^2**



Impressive use of the Super CD can be seen in *Gradius II.* Konami's fantastic conversion of the *Vulcan Venture* coin-op has been very difficult to get hold of since it was released in December last year, but fans of the series shouldn't miss it.



The American PC Engine, the Turbo Grafx, wasn't the same success story, though two million units and 100,000 CD systems have been sold



To replace the old briefcase CD-ROM system, NEC introduced the PC Engine Duo in 1991. A newer white model, the Duo R, is now available

still makes it (gulp) ten times more expensive than a Game Boy.

Ever heard of the PC Engine Shuttle? Well few people did ever get to hear about it. This spaceship-shaped version of the PC Engine released at the same time as the Core Grafx, and was targeted directly at the younger player. While this idea might have worked in theory, in practice it was unsuccessful. By selling it at only marginally less than the price of a standard Core Grafx, and at more than the price of the white PC Engine that many shops still stocked, there wasn't much point to the Shuttle. And besides, it couldn't be hooked up to the CD-ROM system, which the future of the Engine was based around. The Shuttle was a mistake but it wasn't on its own in that respect, as you're about to see.

NEC's most extravagant hour was undoubtedly the introduction of the PC Engine Super Grafx console in December 1989. This was their attempt at quashing the growing enthusiasm for the Mega Drive which had been released in Japan. Aimed at more dedicated players than the standard engine, the Super Grafx was designed as a faster machine, a sort of go-faster, turbo-nutter PC Engine for hardcore gamefreaks.

Technically it's a strange beast. In order to maintain compatibility with the standard Engine, the CPU inside the Super Grafx was kept the same. In fact, most of the Super Grafx is the same as a standard PC Engine. The main difference lies with the inclusion of a second video display chip (VDC) – the custom graphics chip responsible for the Engine's hardware scrolling and sprite handling. A second chip doubled the number of available sprites to 128, reducing potential flicker, and also added an extra playfield, or background, for parallax scrolling. Other differences were mainly in the amount of RAM in the machine. Video RAM was doubled, naturally, while the pitiful 8K of main RAM in the original Engine was increased fourfold for the Super Grafx.

Unfortunately, though, the Super Grafx turned out to be a

Continued next page

Name: **R-Type I-II**
By: **HudsonSoft (1988)**
Format: **2 X 2 Mbit HuCard**



The graphics are superb in *R-Type* – the detail and use of colour has hardly been bettered. But the gameplay is in a class of its own. Despite the fact that the cartridge version comes on two HuCards, this is still the Engine's finest hour.

Name: **Ultimate Tiger**
By: **Taito (1989)**
Format: **2 Mbit HuCard**



The coin-op was overlooked in the arcades but Taito managed to cram it perfectly into 256K. With great music and the best 'copter sound ever, *Ultimate Tiger*'s an intense shoot 'em up worthy of a place in any Engine owner's collection.

Name: **Street Fighter II CE**
By: **NEC (1993)**
Format: **20 Mbit HuCard**



People who reckon that the Engine is no match to the Mega Drive should take a look at this. The graphics are more colourful than the Mega Drive game and the samples are clearer. It's a shame that Turbo mode wasn't included, though.

Name: **Ys Books 1 & 2**
By: **HudsonSoft**
Format: **CD-ROM^2**



Many aspects of this action RPG series are crude and some of the graphics looked ropey when it was released. But for many this is a cult RPG making great use of the CD for speech, animation and probably the best music ever heard on the system.

techview: PC Engine



The American Turbo Duo – by far the most popular machine on import – also runs Japanese PC Engine CDs. Japanese HuCards need an adaptor



First came the GT (left) and jaws dropped at the price. The brilliant laptop Engine, the PC Engine LT, was in another league, though...

Continued

spectacular flop. Why did such an exciting machine fail to take off? Well, first of all it wasn't. Exciting, that is. From a marketing viewpoint the plasticky, ugly outer casing wasn't a good choice. NEC had tried to go for a mechanical, techy look while increasing the size of the machine to fit in with the trend (at the time) for bigger home gadgets in Japan. Many Japanese players thought it looked gimmicky – hardly fitting in with the ethos of the PC Engine – a compact, understated, but powerful games machine. It made the mistake of trying to look more powerful than it actually was.

Because of the decision to keep the machine compatible with the original Engine, developers found it cumbersome to program. While the machine was capable of displaying twice as many sprites, as well as running two playfields instead of one, the increased workload on the CPU meant the old 8bit processor wasn't really up to the job. And even worse, the Super Grafx's sound capabilities weren't improved over the original Engine sound – hardly the PC Engine's original strong point. An initial manufacturing run of 50,000 units was supported by the release of a single game – *Battle Ace* – a crude 3D shoot 'em up in the style of *After Burner*. A superb conversion of *Ghouls 'n' Ghosts* followed three months later, but by this time the fate of the machine looked certain – Super Grafx R.I.P.

In America NEC had a harder time convincing the public that this was a great games machine. After struggling along solo for a while, a joint venture with HudsonSoft established Turbo Technologies, who improved the status of the machine and its software in the US market. However, the badly Americanised versions of Japanese games still didn't impress, and the restyled Turbo Grafx made few friends.

With the release of the Turbo Duo, things improved stateside with quality Super CD-ROM software still putting most Sega CD games to shame, but realistically it seems unlikely that TTI will ever be able to gain a substantial share of the US videogames market.

Name: **Gate Of Thunder**
By: **HudsonSoft**
Format: **Super CD-ROM²**



One of the first games to exploit the greater memory of the Super CD-ROM² system, *Gate Of Thunder* excels in both speed and intensity. The graphics aren't the most detailed or colourful around, but the gameplay is great.

Name: **Lords Of Thunder**
Publisher: **HudsonSoft**
Format: **Super CD-ROM²**



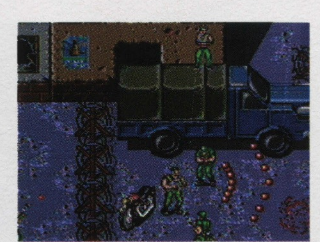
After the spaceship theme of the first game, the old world feel of *LOT* is a nice change and the graphics are outstanding – using the scrolling and sprite handling abilities of the Engine to the limit. The music isn't quite up to the first game, though.

Name: **Splash Lake**
By: **NEC Avenue (1991)**
Format: **Super CD-ROM²**

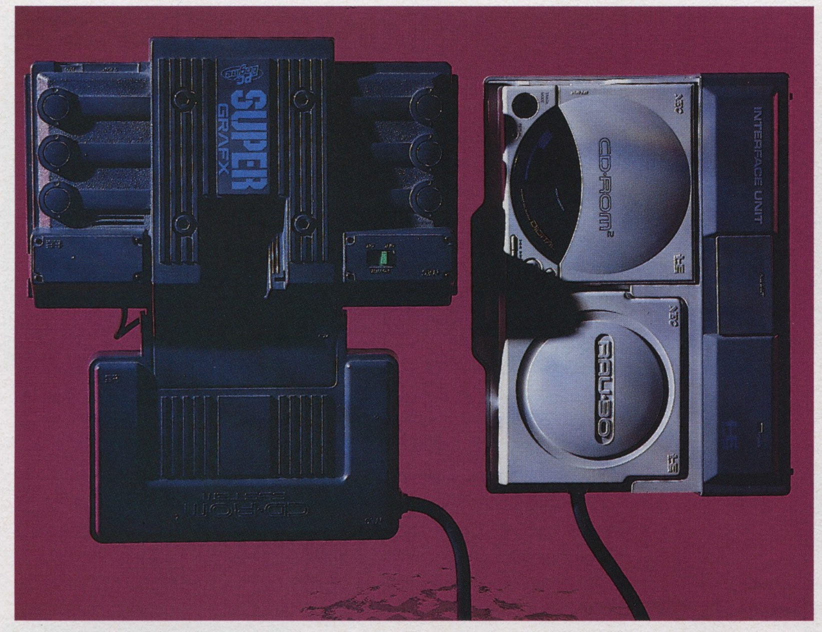


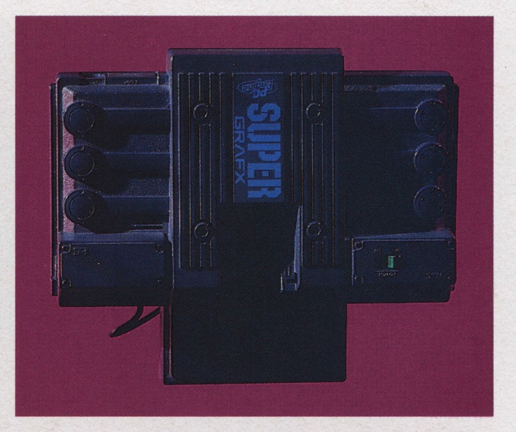
An extremely silly, but popular, puzzle game with simple gameplay involving a pecking duck and lots of tiles. It's fun, but perhaps the best aspect of the whole thing is the hilarious music – some of it sounds like Steptoe and Son.

Name: **Bloody Wolf**
By: **DataEast (1989)**
Format: **4 Mbit HuCard**



This *Commando* clone looks a bit dated, but still has more than its fair share of gameplay. It's sufficiently violent, it uses an unusual perspective, and above all is very fun to play. Just don't compare its looks to the state of the art now.





The Super Grafx was a space-hungry beast on it's own (top right), but when connected to the CD-ROM through a huge adaptor, it started to take over the home



The only five dedicated Super Grafx games – *1941, Aldynes, Battle Ace, Grand Sword* and *Ghouls 'n Ghosts*

The arrival of the next generation PC Engine has been rumoured for the last couple of years. While 3DO and Atari seem confident to usher in a new dawn of technology, NEC has remained cautious, like its main rivals Nintendo and Sega, preferring to see out its 8 and 16bit hardware to the very end, and waiting until it can price new hardware competitively.

NEC's 32bit technology known as the Tetsujin (which translates as Iron Man) was announced back in the summer of 1992 and NEC had originally planned to release this super console around the Christmas period of 1992, but incomplete software persuaded them to delay it until the following spring. Unfortunately, though, Spring 1993 just wasn't to be either. So, 1½ years after the completion of the hardware it seems NEC are finally confident of a release date for their machine – Spring 1994.

A developers' preview of the prototype hardware was held way back in December '92 when selected companies from the UK and Europe were invited to HudsonSoft's headquarters in Sapporo to assess the hardware. And here's what was shown:

A CD-ROM-based machine containing a five-chip custom graphics set developed by HudsonSoft, supporting full-screen JPEG assisted 24bit colour FMV at 30 fps. The machine also used a RISC-based CPU running at just under 25 MHz and was supported by lots of RAM – at least two megabytes as an immediate cache for the CD. Most impressively, though, the hardware also allows for around seven or eight hardware playfields, meaning multiple parallax images and complex 3D backgrounds. Remember, the original PC Engine only contained a single playfield.

At the same preview HudsonSoft ran a PC Engine emulator on their new machine that was powered by the RISC processor, and they managed to get their original Engine version of *R-Type* running in a single playfield.

And demos of JPEG-assisted 24bit full-motion video were

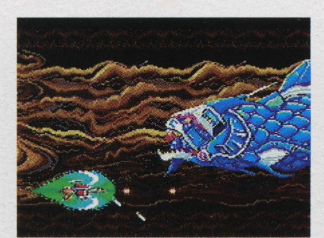
Continued next page

Name: **Bomberman**
By: **HudsonSoft (1990)**
Format: **4 Mbit HuCard**



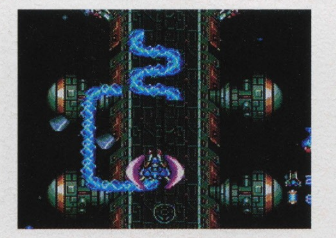
Way before any other machine, the PC Engine played host to the excellent *Bomberman*. In oneplayer mode things get a bit tedious, but with up to five players the action takes some beating. Probably the best multiplayer game ever created.

Name: **Super Darius**
By: **Nec Avenue (1990)**
Format: **CD-ROM²**



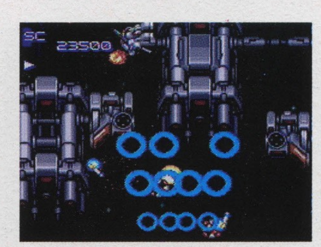
The first of many CD-ROM shoot 'em ups to impress on the Engine, *Super Darius* is an incredibly tough blaster, that duplicates the three-screen coin-op surprisingly well. Great Surround Sound music and some fantastic boss creatures.

Name: **Gunhed**
By: **HudsonSoft (1989)**
Format: **3 Mbit**



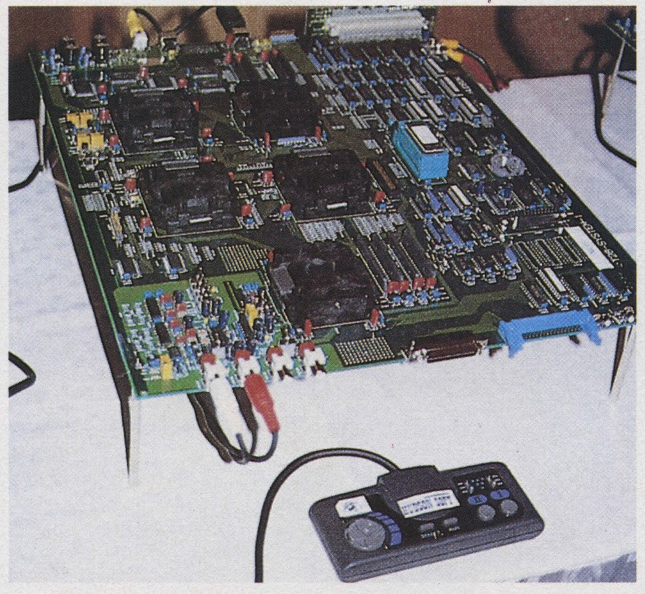
A highly-rated game at the time, *Gunhed* impressed with its fast vertical scrolling and great weapons. It still plays well, but for the most part it's difficult to see why it was so highly regarded. Extremely impressive sprite handling, though.

Name: **Super Star Soldier**
By: **HudsonSoft (1991)**
Format: **4 Mbit HuCard**



The second in the *Gunhed* series has more impressive graphics, a darker more menacing feel to it, and is a bit tougher than its prequel. The power ups aren't quite as over the top as those found in *Gunhed*, but the gameplay's just as slick.

techview: PC Engine

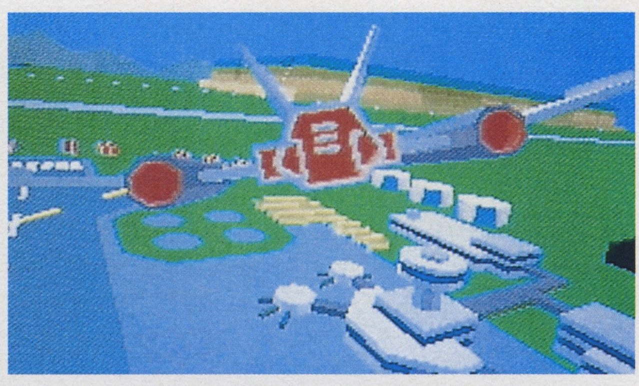


The provisional Tetsujin hardware includes a 25 Mhz RISC processor, and a custom chipset developed by hardware gurus Hudson

Continued

displayed – the 16 million colour images ran at 30 frames per second and the quality was supposedly excellent – far better than the rough CinePak demos the 3DO Multiplayer currently offers. The only noticeable trade-off appeared to be a limit of 32 minutes of video per CD disc.

HudsonSoft and NEC Avenue were the only software companies to demonstrate any new games – three were shown. A 3D polygon shoot 'em up, provisionally titled *Super Star Soldier 3D*, a far cry from the vertical scroller on the PC Engine. Like Namco's astonishing *Galaxian³*, Hudson's game used a full-motion polygon backdrop (an advanced version of what is shown above) with detailed real time 3D sprites on top. The result? A game that looked remarkably similar to Namco's *Solvalou*. On a more interactive level, an attractive *Dungeon Master*-style 3D role playing game was shown, with visuals surpassing even those of *Forgotten Castle* on the PC. The only other thing of interest was a very early demo of a robot fighting game which looked good if only for its use



A tentatively titled *Super Star Soldier 3D* was one of the early demos aimed at whetting the appetites of developers for the Tetsujin...

of rotoscoped animation.

So NEC and Hudson Soft seem to be onto another winner. One developer **Edge** spoke to, had this to say: 'Hudson's original PC Engine was so cleverly designed that we obviously have high hopes for the new one. What separates Hudson is that they really think about the kind of games they want to see when designing hardware – unlike the guys who did 3DO. That's a typical US mess: strange, and restrictive in so many ways. Hudson's kit will be a whole lot better.'

But with so many new consoles emerging all the time, how will the Tetsujin fare against the competition? 'In terms of raw specs it's easily on par with the Jaguar, and definitely better than 3DO,' he adds. 'How it compares to the Saturn and the new Nintendo hardware is another matter altogether.'

Keep up to date with **Edge** for more news on the Tetsujin project.

Buying a PC Engine

The most popular machine currently available on import is the US version of the PC Engine Duo, the Turbo Duo, but Japanese machines are still available. The most important thing to remember when buying a PC Engine is that Scart versions need a colour booster to compensate for the poor RGB quality. Without this, colours are usually very dark.
Contacts: Console Concepts – 0782 712759
Raven Games – 081 663 6810

For an excellent comprehensive guide to the PC Engine send a cheque or postal order for £3 to Richard Gibbs, 3 Garden Place, Bootle, Liverpool, L20 3LW

Name: **Parasol Stars**
By: **Taito (1991)**
Format: **3 Mbit**



This is closer to *Bubble Bobble* than *Rainbow Islands*, so fans of the first game will probably love it. *Parasol Stars* is a colourful and enjoyable twoplayer platform game with Bub and Bob armed with parasols to kill screen after screen of baddies.

Name: **Salamander**
By: **Konami (1991)**
Format: **2 Mbit HuCard**



Fancy the entire *Salamander* coin-op on one tiny 256K card? The graphics look bland at first, but the speed and playability of the game impress from the start. The PC Engine has the best *Nemesis* conversions around.

Name: **Air Zonk**
By: **HudsonSoft (1992)**
Format: **8 Mbit HuCard**



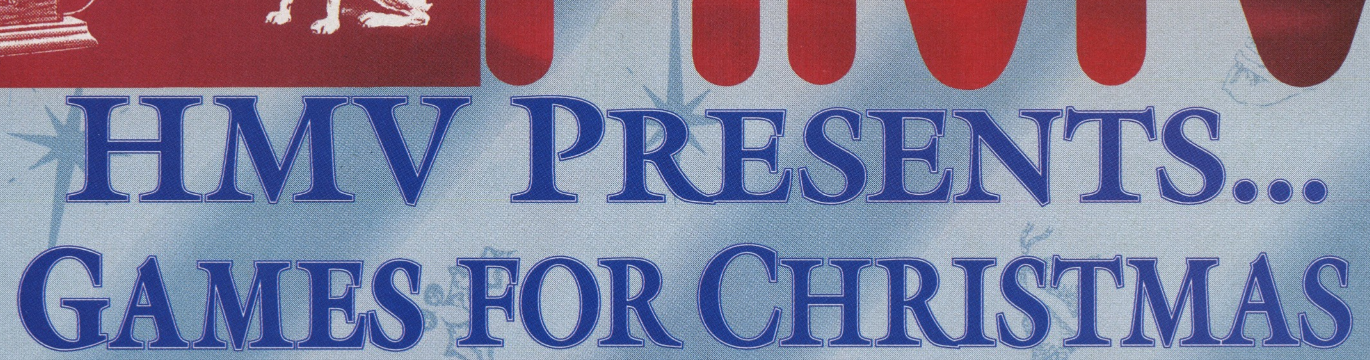
PC Kid in a shoot 'em up might not sound like a good combination, but this is as skillfully crafted as most HudsonSoft releases. Colourful graphics, amazing sprite handling... You'll find the best qualities of the top Engine shoot 'em ups in here.

Name: **Dracula X**
By: **Konami (1993)**
Format: **Super CD-ROM²**



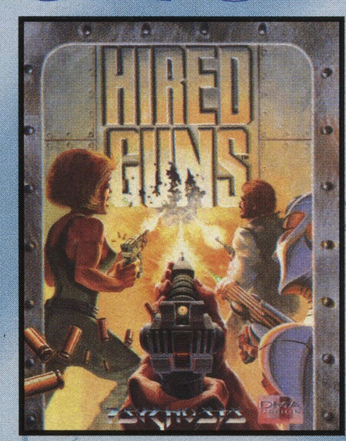
A huge, challenging game with multiple routes, secret rooms, a choice of characters and that classic *Castlevania* playability. Graphically, not quite as good as it could have been, but who cares when there's so much to get your teeth into. (Sorry.)

HMV

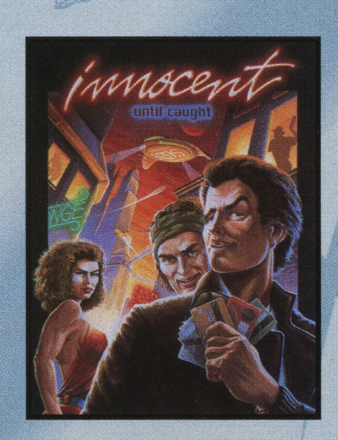




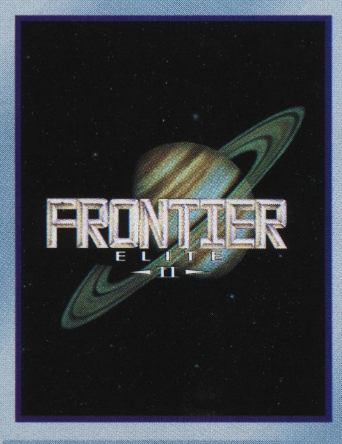
SAM & MAX
(PC • CD ROM)



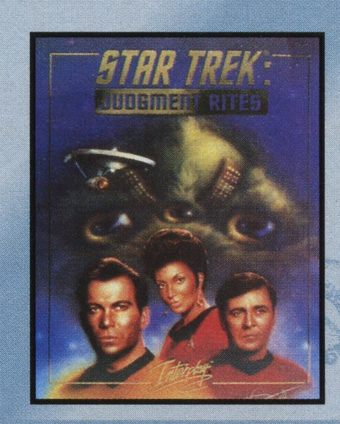
HIRED GUNS
(PC • AMIGA)



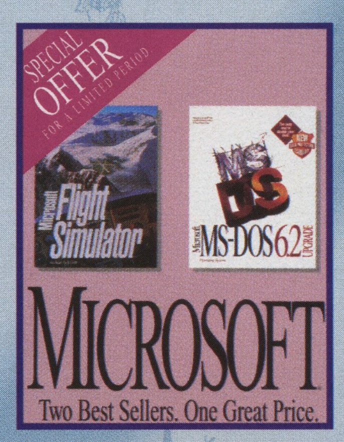
INNOCENT
(PC • AMIGA)



ELITE 2
(PC • AMIGA)



STAR TREK - judgment rites
(PC)



FLIGHT SIM5/MS DOS
6.2 PACK £69.99
(PC)



MUSIC RETAILER OF THE YEAR



VIDEO RETAILER OF THE YEAR



Subject to availability

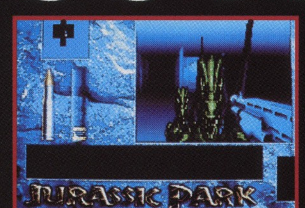
KNOW HMV • KNOW GAMES

JURASSIC PARK™

TM & © 1992 UNIVERSAL CITY STUDIOS, INC. & AMBLIN ENTERTAINMENT, INC.

WHEN THE STREET JUST AIN'T TOUGH ENOUGH...

GO PLAY IN THE PARK









IF IT'S NOT JURASSIC PARK IT'S EXTINCT







OCEAN SOFTWARE LIMITED · 2 CASTLE STREET · CASTLEFIELD · MANCHESTER · M3 4LZ · TELEPHONE: 061 832 6633 · FAX: 061 834 0650

Cybermorph Secret Of Mana **Myst** Frontier: Elite II **Samurai Shodown** Dracula X: Devil's Castle **Aladdin** Joe Montana's NFL Football **Kether** IndyCar Racing...

Testscreen

This issue, **Edge** is proud to present a world exclusive review of *Cybermorph* – the very first 64bit Jaguar game.

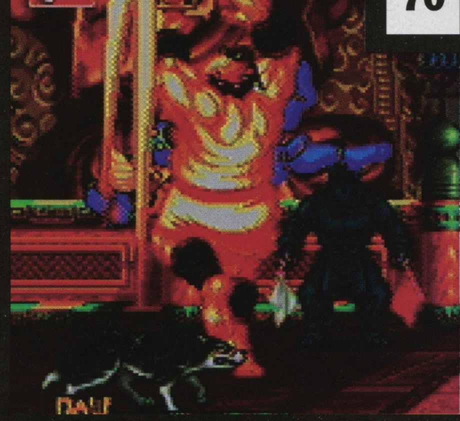
This sumptuous looking 3D shoot 'em up may not set new standards for originality or gameplay, but as a sign of things to come, it certainly bodes well.

We were hoping to include a review of *Mad Dog McCree* on 3DO, but time and the postal service conspired against us: instead we take a look at *Myst* on the Apple Mac – a CD-ROM game with stunning rendered visuals.

Neo-Geo owners have a tricky decision: should they buy *Samurai Shodown* – probably the best Neo-Geo game to date – but add to their already overstocked library of beat 'em ups?

Gamers with Mega CDs don't have it so good: the only releases this month are *Joe Montana* – technically competent, but unplayable – and *Terminator CD*, a platform game so dreary we didn't include it. E









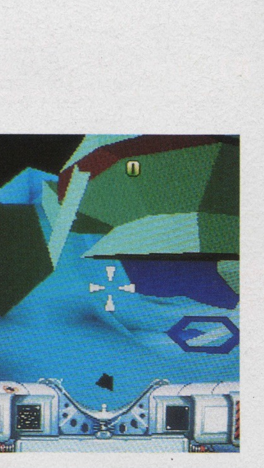


Cybermorph

Format:	Jaguar
Publisher:	Atari
Developer:	Attention To Detail
Price:	£NA
Size:	16 Mbit
Release:	December



With 64bit architecture and a host of custom chips, the Jaguar excels at 3D. Indeed, *Cybermorph* – which is bundled with the machine – is a glorious looking game with Gouraud shading and loads of colours





With *Cybermorph*, you can view the action from the cockpit (top) or from behind your ship, *Starwing*-style (bottom). You also get a radar in the top righthand corner of the screen and a ground height/altimeter in the bottom righthand corner

Atari need a winner. With the Falcon dead, the Lynx an endangered species and the ST coughing up blood after a severe bruising from the Amiga, Atari's hopes of success – and even survival – are pinned on the matt black casing of the Jaguar.

And, likewise, the Jaguar needs a winner. The Super NES has *Super Mario*, *Starwing* and *Street Fighter II*. The Mega Drive has *Sonic*, *John Madden* and *Street Fighter II*.

Like 3DO, the Jaguar needs to make an impact. Thankfully, it has *Cybermorph* on its side, which comes bundled with the machine.

Cybermorph – coded in the UK by Attention To Detail – is as good a showpiece for the Jaguar as Atari could have hoped for.

Set on a distant planet... well, 52 distant planets to be exact, *Cybermorph* is a cross between *Starwing*, *Virus* and a 3D *Defender*. At its most basic, the game is a collect and shoot 'em up: kill the baddies, get the power-ups and collect all the pods so you can exit to the next planet. Simple.

Of course, there's much more to it than that. Each planet has its own brand of devious enemies who shoot at you, ram you, stick to your craft and generally get in the way.

Pods are hidden, imprisoned, caged up or



This transport ship shuttles back and forth carrying power-ups (the purple and yellow discs). Blast it, and they fall to the floor...

guarded by forcefields. And large sections of the planet are blocked by walls or hidden pathways through ravines and valleys.

Simple, yes. Easy, no.

Okay, you get six weapon systems to collect and three different superweapons with which to lay waste your enemies.

But you also get a paltry three lives which, on your first attempt, should last about a minute. As you find your way around the multi-button joypad (which isn't quite as dismal as **Edge** first feared) and gradually learn to control your ship, the game opens up to reveal hidden depths.

You also have a guide through this bewildering world in the shape of Skylar, your onboard holograph. This bald female pops up to proffer the odd word of advice, encouragement and to tell you when you have only one pod left to pick up.

The speech is 16bit sample perfect – real F-15 cockpit stuff – and is a welcome sound amongst the laserfire and explosions. Skylar has a repertoire of 11 phrases from 'Ouch' when you take a hit, to 'Portal now open' when the last pod is in your possession.



Spinning triangles are teleporters which warp you to different locations. The screen performs a swift blue-out, and you reappear elsewhere









You can view the action from a number of standpoints: from behind your ship (main), from the left (top left), inside the cockpit (top centre), or from the right (top right). You can also view the ship from in front which, like the side views, is a nice touch but pretty much useless...

In fact it's a lot of these subtle – almost useless – touches, that elevate *Cybermorph* from just another 3D game. You can view your ship from four different angles, not including a cockpit view; you can alter the volume of sound effects, engine whine and Skylar's speech while the game is paused; you can toggle the targeting crosshair on and off; and you can reconfigure the controls to suit your own preferences. Even the cartridge is user-friendly, saving your control settings and high scores, thanks to an E^{2}PROM (Electrically Programmable Read-Only Memory) chip inside.

And speaking, as we were, of controls, the T-Griffon ship is surprisingly responsive – almost over-responsive at first, until you get to grips with its turning circle and the way in which the entire 3D landscape moves around the ship. One excellent feature is that you can stop the ship dead, and even go into reverse, sliding backwards over the landscape (a

Continued next page



Here are two of the pods that you are tasked with collecting. Some, like these, are found just lying around the place while others are secreted in prisons or behind huge, apparently impregnable forcefields



This missile-gobbing head appears as the first end-of-system boss. However he pops again as a standard enemy on planet Hades (above). Having dispatched his arsenal, he slides back below ground, out of sight





Vortex towers (top) sit like tall, polygonal plants, infecting the landscape with antimatter. Worse, Pod Snatchers (bottom) pick up your pods up and drop them onto the blackened land where they slowly die – unless you come to their rescue

particularly useful tactic since you can still fire forwards at any oncoming vehicles).

So the T-Griffon is more like a helicopter than a plane – and a good thing too. It would be far less playable if, on missing a pod, you had to fly around for another pass.

Given that *Cybermorph* is a) tricky and b) huge, it's only sensible that ATD have included a password system, enabling you to save your game after every eight planets. And there's a code to a secret system with... well, that would be telling.

Extra lives are awarded on gaining high scores, and with pick-ups. There are also a number of secret worlds to be discovered, strewn with free power-ups.

Without doubt, *Cybermorph*'s main lure is the visuals: it sure is a looker, with millions of colours and stunning Gouraud shaded landscape. It all moves dead smoothly but, to be honest, the 3D ships and buildings are all a bit basic, made of simple shapes with gaudy colour schemes. There's little of the finesse that you find with simulators like *TFX*, and even *Starwing* contains much more interesting enemies.

But in the final assessment, it's gameplay that counts and *Cybermorph* has nothing to fear in that department. From the first firebutton press, it's pretty much non-stop action, and even though there's no timer, the game comes with a built-in sense of panic as you attempt to scoop up all the pods and haul ass outta there.

Each planet differs enough from the last to avoid unwanted sensations of déja vu, and there are enough new enemies and puzzle



Your ship – the T-Griffon, or Transmogriffon – changes shape depending upon its speed, becoming sleeker at high velocity

elements introduced so that you just never quite know what's coming next...

It's also a perfect first-time game for new Jaguar owners: it's easy to pick up and play, you can roam around blasting things to bits without necessarily knowing what your mission is, and you have a choice of planets to play before you start going over old ground.

But, best of all, Jaguar owners can feel that their purchase was justified. *Cybermorph* is a fine game in its own right, and carries with it the promise of Jaguar games to come – not least of which is the sequel *Battlemorph* from ATD, due late '94.

Like *Crash 'n Burn* which is bundled with Panasonic's 3DO, *Cybermorph* isn't perfect, but it's a damn good start. And that's exactly what the Jaguar needs.

Edge rating: **Eight/**10







Later planets provide puzzles to solve. The huge, blue forcefield (main) – which looks more impressive in the game itself – separates you from your pods. Fly through the right transporter and you find the generator (bottom left) that powers the forcefield. Destroy it, warp back and it's pod city (bottom right)

Attention To Detail

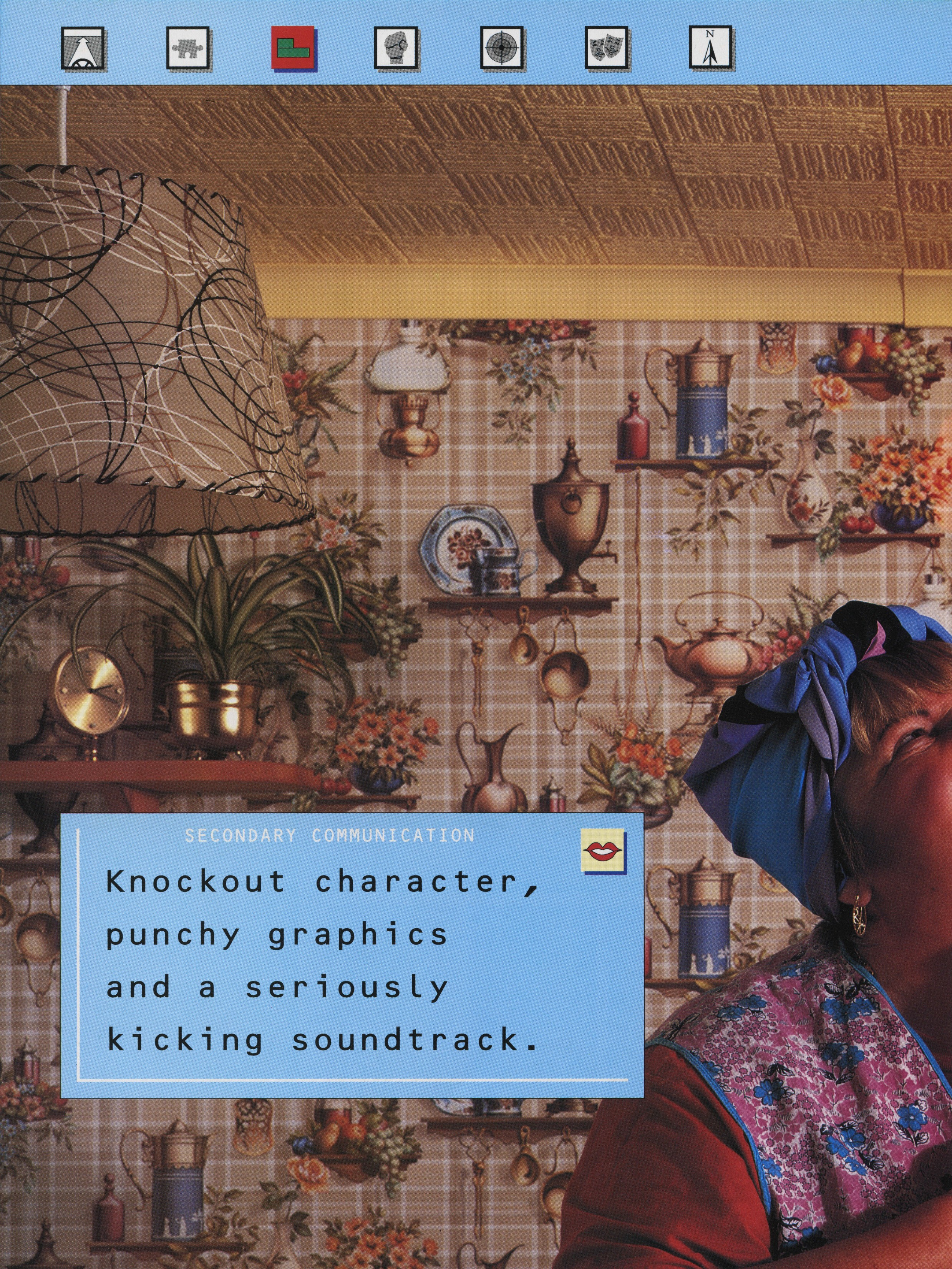


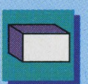
Cybermorph was written by Attention To Detail – a small outfit now based in a converted farm building near Warwick.

But while the name may not ring many bells, ATD have been involved in some major projects, including a development system and *The Last Ninja* for Konix' doomed Multisystem, plus a couple of projects for Lucasfilm games – *Night Shift* and *Indiana Jones And The Fate Of Atlantis*.

They have also been involved with some coin-op quiz machines and have a new coin-op system under wraps. They are currently undertaking *Battlemorph* for the Jaguar and have a conversion of the Lynx game *Blue Lightning* for the end of next year.

Cybermorph was programmed by Fred Gill and Brian Pollock, with design by Chris Gibbs, Fred and Brian. Graphics were the responsibility of Chris and Ian Harling, with sound by Uncle Art and Andrew Holton. It was produced by John Skruch at Atari's Sunnyvale HQ in California.


SECONDARY COMMUNICATION
Knockout character, punchy graphics and a seriously kicking soundtrack.


TERTIARY COMMUNICATION

Ninvolving
Ninto the groove
Nintendo

KAGING

Plok

Nintendo
PLOK
SUPER NINTENDO
PAL VERSION

Game around £40

Secret Of Mana

Format:	SNES
Publisher:	Square Soft
Developer:	In-house
Price:	£60 (import)
Size:	16 Mbit + BB
Release:	Out now (US)

On the face of things, the *Secret Of Mana* probably won't do as well as it deserves to, which is a shame as it's such a well-crafted piece of software. It's better than *Ys I & II* on the PC Engine. Better than *Zelda* on the SNES. And yes, better than *Landstalker* on the Mega Drive.

But it arrives in the States completely un-hyped and mostly unheard of. Ironic, when the Super Famicom version, *Seiken Densetsu 2*, was far and away the most widely covered game of the year in Japan, generating huge levels of interest, and selling to avid gameplayers by the truckload.

At a cursory glance *Secret Of Mana* looks like an average Japanese RPG with a pre-set storyline, and translated text. That is, your time's either spent wandering around the place killing things, or talking to small cute characters. But within this well-worn framework *Mana* includes some of the best game design and features ever seen: simultaneous threeplayer action, the best combat system ever designed, the best player interface ever designed, a superb control system, and yes, some of the most engrossing and rewarding gameplay yet. It really is in a class of its own as far as action RPGs or adventures go.

And that's the point to stress here. It's essentially an adventure – all the traditional RPG elements are included – but it's fast, and combat plays a far greater role. Something that's far more skillfully handled and enjoyable than it was in *Zelda*, for example. There are



One of the first tough boss opponents is this plant-like bird creature



Supplied by Console Concepts (0782 712759)

The game begins in earnest when the sprite and girl characters have been found and recruited on the quest – in oneplayer mode, two of the characters follow you around the screen, even attacking enemies when confronted. With the Super Multitap, threeplayer games are superb. (inset) First steps for the hero



The game world is so huge in *Secret Of Mana* that airborne travel is one of the fastest ways to get around. Pay a small, squat chap about 50 gold coins and you'll get fired from a cannon to a destination of your choice. Mode 7 scrolling like this is used much later in the game when you can ride a dragon

64 different types of weapons, 58 types of armour, 27 different spells and all this detail is handled by a superbly designed player interface. Selection rings rotate around the player and don't obscure the action onscreen, while the ability to select something and then give it to one of your companions is simplicity itself.

And as if all that wasn't enough, *Secret Of Mana* looks great too. For a start it's great to see that the Americans have kept the brilliant Japanese artwork in the packaging – usually the first thing to go. And the game graphics are unique and appealing, reflecting the artist's surreal vision of the game perfectly. Some of the nicer graphic effects are saved until much later in the game, though. What can't be conveyed here is the beautiful sounds in *Secret Of Mana*. The wide range of folky, ethereal soundtracks really create a wonderful atmosphere, even if a few of the tunes get a little irritating at times.

Of course, the sheer size of *Secret Of Mana* is staggering. It's estimated that the average player will take around 70 hours to complete it. And for that reason alone it's a serious gameplaying proposition, offering great value.

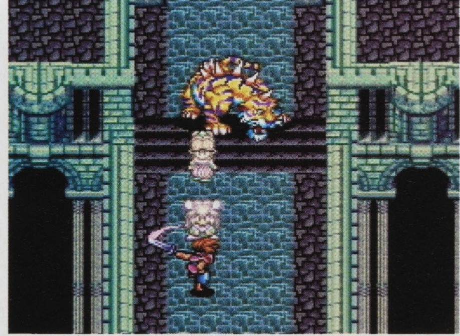
The fact that it's also an immensely entertaining game, makes it an unmissable experience.



Edge rating: **Nine**/10



In the Witch's castle the characters prepare to meet the boss, which lies beyond this room…



Spiky Tiger is a tough opponent – here, the girl and sprite have died, hence their ghostly shapes

The Power of Mana

Okay, here's the plot in a nutshell. The Mana tree – the stunning creation you'll see on the game box and poster – is the source of all peace and harmony in the land. However it's under threat from demons and it's your job to track down eight seeds which have been scattered through the land in order to protect its people.

Once a palace is sealed off you'll receive an energy orb which improves the power of your weapons. Of course, it's hardly that simple. Along the way the quest is divided up into dozens of sub-quests which will take ages to get through. Expect a few sleepless nights with this one…

Gameplay







(From the top) Using the whip, our heroes can cross gaps; the player interfaces consist of scrolling rings; it's possible to set attack patterns; each weapon can be powered up too

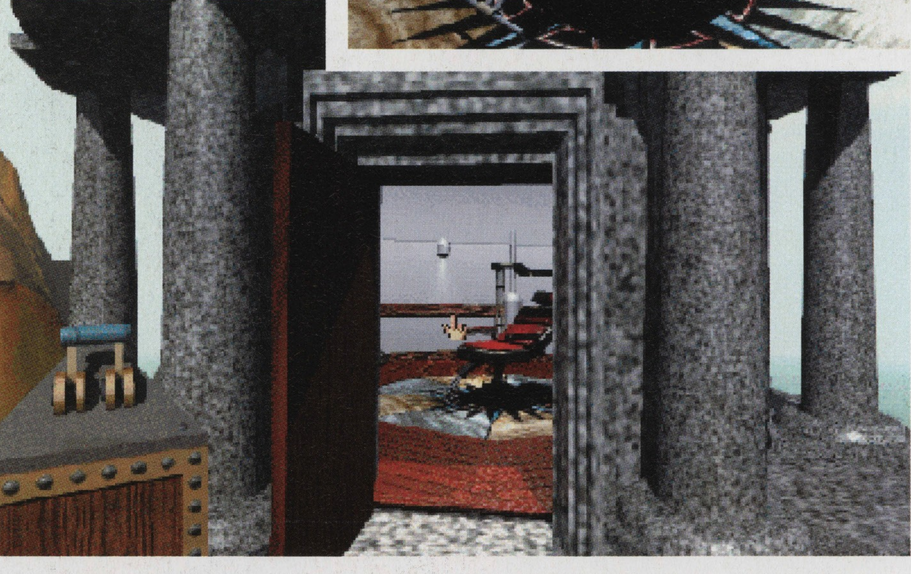
Myst

Format:	Mac CD-ROM
Publisher:	Broderbund
Developer:	Cyan
Price:	£40
Size:	1 CD
Release UK:	Out now





With lighting and texture effects like these, you sometimes feel you've wandered into a ray-tracing slideshow demo by accident...



As you explore the 3D world of *Myst*, doors can be opened allowing you to enter rooms beyond. Amazingly, it would appear that you've stumbled into a live recording session of Mastermind (inset)

It's been a while since we've seen games using their all-out weirdness as their unique selling point. But here's a game that isn't ashamed to do exactly that, proclaiming itself as 'the surrealistic adventure that will become your world'.

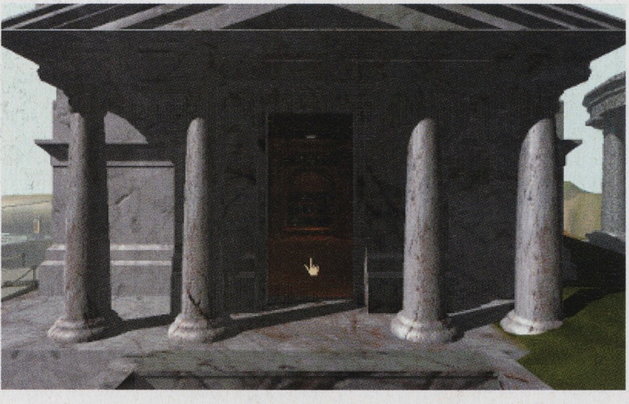
Now, there have been a number of Amiga budget releases whose contribution to the world of videogames can best be described as 'surreal'. But at least the creators of *Myst* can claim that they did it deliberately.

In fact, this is a pretty standard (if more than standardly pretty) graphic adventure – the surrealism is mostly confined to the plot.

You've fallen into a bizarre world contained within the pages of a book, and you get to point-and-click your way around a large number of gorgeously ray-traced locations, starting off on an island that looks like the set for a '90s remake of 'The Prisoner'. There's the traditional selection of objects to click on (though disappointingly few to start off with), and some reasonably pleasant animations when you find an object that actually does something. Nothing to set the CD adventuring world alight so far, then.

The obvious criticism to be made is that the game engine isn't anywhere as near as sophisticated as the beautifully rendered ingame graphics. Coming from the people responsible for the influential Macintosh graphic adventure *Cosmic Osmo* – more accurately described (by the authors themselves) as a 'non-threatening exploratory environment' – *Myst* still has that 'wander around admiring the pictures and clicking on things occasionally' feel, with none of the zany character interaction that makes games like *Monkey Island* such fun.

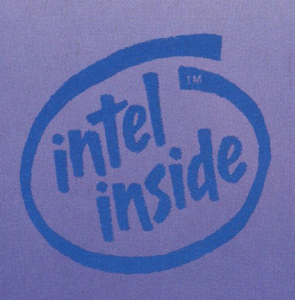
But if you prefer *Dark Seed* over, say, the LucasArts games, you could easily spend hours in Myst just checking out the nice scenery.



A wood-panelled library is hidden within this Greek temple. When you get in, there aren't many books, so check out the pictures...

Edge rating: **Six/**10

BUSINESS FOR PLEASURE





Centrex 486sx 25 Multimedia Entry

Includes:
- Mitsumi CD-ROM.
- Sound Producer, Sound Blaster II Compat. complete with speakers.
- Goldstar 14" SVGA Monitor.
- 1MB SVGA 65000 Colour card.
- 40MB Hard Disk.
- Cyrix S40 or DX33 options available.



Centrex 486sx 25 Multimedia Pro

Includes:
- Mitsumi CD-ROM.
- Sound Producer Pro, 16 bit Sound Blaster II Compatible plus speakers.
- Goldstar 14" SVGA Monitor.
- 1MB SVGA 65000 Colour card.
- 170MB Hard Disk.
- Cyrix S40 or DX33 options available.



Centrex 486sx 25 Multimedia Pro+

Includes:
- Panasonic dual speed CD-ROM.
- Sound Producer Pro, 16 bit Sound Blaster II Compat. complete with speakers.
- Goldstar 14" SVGA Monitor.
- 1MB SVGA 65000 Colour card.
- 170MB Hard Disk.
- Cyrix S40 or DX33 options available.



Alder Hills Park, 16 Alder Hills, Poole, Dorset. BH12 4AR

0202 718388

MULTIMEDIA ESSENTIALS

CD ROMS

Panasonic CR562	£150.00
Panasonic with I/F	£175.00
Mitsumi LU005S with I/F	£102.35

SOUND CARDS

Orchid Sound Producer (Sound Blaster Compat)	£40.45
Orchid Sound Producer Pro (Sound Blaster Pro Compat)	£75.43
Orchid Game Wave	£153.75
Orchid Sound Wave	£171.78
Sound Blaster II	£54.38
Sound Blaster Pro	£94.50
Sound Blaster 16	£141.25

SPEAKERS

Zy-Fi Active Speakers	£31.66
Zy-Fi Pro Active	£45.06

JOYSTICKS

Gravis Joystick	£34.99
Gravis Analogue Pro	£44.68

HOW TO ORDER

Call our Sales Line on 0202 718388, be ready with your credit/debit card. Alternatively send your order by post enclosing a cheque for the full amount (Inc. VAT & Delv.).









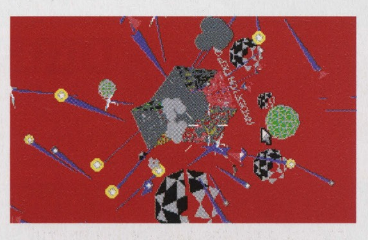
All Prices Exclude VAT & Delivery. Prices & Specifications subject to change without notice and subject to our conditions of sale. All offers subject to availability. E&OE

Frontier: Elite II

Format:	PC/Amiga
Publisher:	Gametek
Developer:	David Braben
Price:	£45
Size:	1 disk
Release UK:	Out Now



All the objects you'll come across, from scout ships to planets, huge transporters to mining outposts, have real substance, and can be flown around, into, and even (in the case of this space station) through



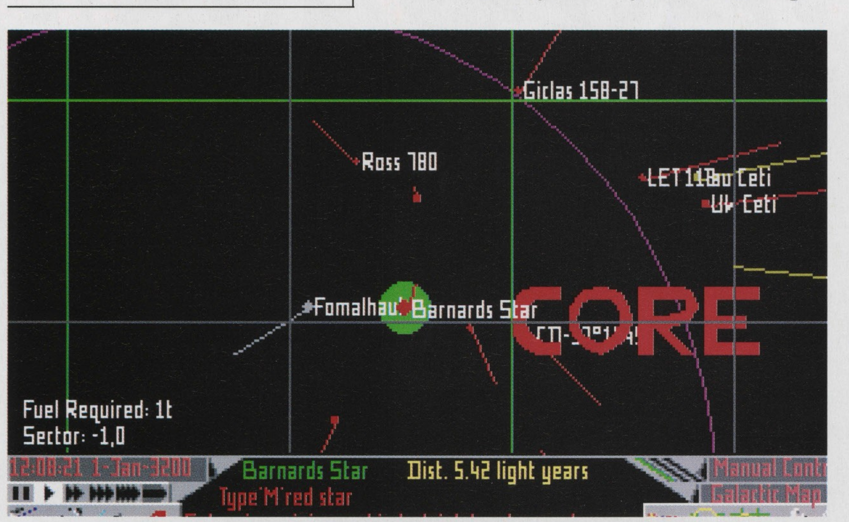
The last thing you'll see as police lasers blow you to smithereens

You'll hate this game for at least two hours. Granted, you'll spend those hours banging your head against its front-end and griping about its graphics, only to find that the quality of the game underneath has possessed you while you were moaning about its presentation, and you'll end up loving it to bits. But the memory of that initial hatred never quite goes away, and sours what could have been a perfect relationship.

With its predecessor, *Elite*, it was love at first sight. Every avid *Elite* fan will clearly remember the day they first saw it. It was unlike anything seen before, and the original game shifted some 750,000 units worldwide.

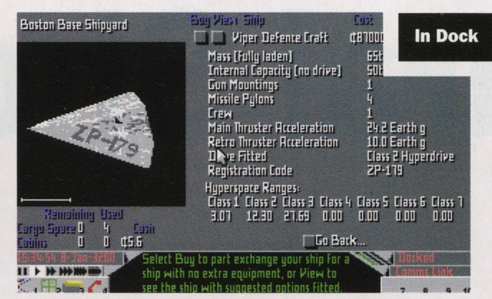
Perhaps it's true that you can only fall in love once, but the sequel simply lacks the thrill of its grandparent; it's lost the 'must play' impact that put *Elite* way ahead of the competition, even before you got into it and realised how deep and involving it was. We've seen so many quality games come and go in the intervening nine years that *Frontier* just doesn't seem to be pushing back any boundaries, as its name would seem to imply.

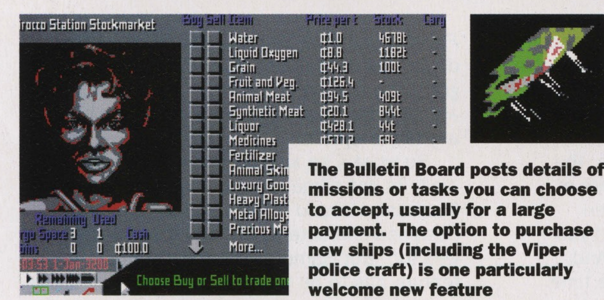
The 3D graphics simply aren't up to scratch, ranging from being a bit crude and jerky (even on a 486 machine) to being virtually unplayably crude and jerky (on an A500). This is an immediate problem because it makes combat extremely difficult, as it's next to impossible to tell where a fast-moving spaceship is going to be the next time the screen updates. You can learn to deal with it, but it doesn't stop the whole experience of



The galactic map shows the positions of the 100,000,000,000 stars in the *Frontier* universe, many mapped from existing astronomical data, the rest statistically extrapolated









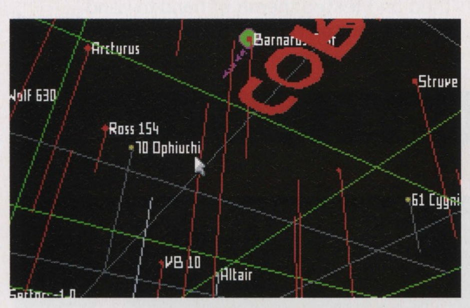


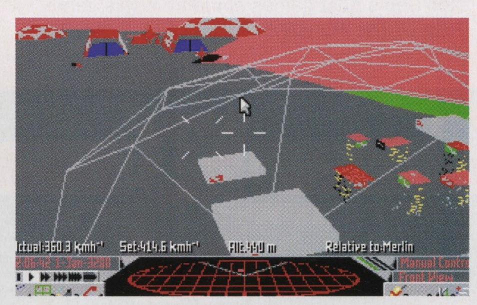


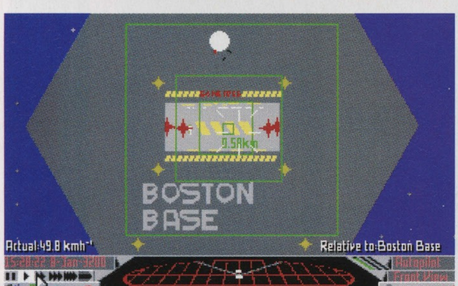
The Bulletin Board posts details of missions or tasks you can choose to accept, usually for a large payment. The option to purchase new ships (including the Viper police craft) is one particularly welcome new feature

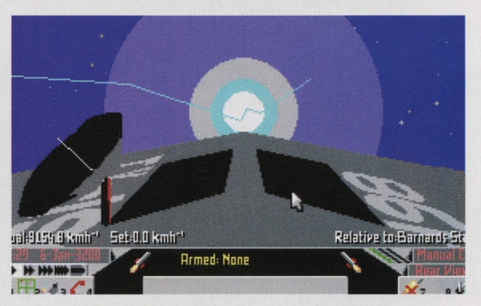
In Dock

The game is divided into two sections; the 3-Dimensional space flight, where you will encounter enemies and attempt to land or dock your craft, and the electronic communication that takes place from the comfort of your cockpit, as you conduct the real business of the game. The facilities available to you at a space port or space station will vary depending on the economic and industrial level of the world you are visiting, but you will always find a 'stockmarket', where you can buy fuel, trade goods or sell booty. There should also be a shipyard, where you can purchase upgrades to your vessel – shield generators, missiles, repair systems and the like – or even trade in your ship for an entirely different craft.









It all depends on how you look at things... you can view the action from a number of different positions. Front view (top right) is the norm, but you will occasionally need to scan behind you (bottom right), assume an external viewpoint to align the ship for a landing, or scan all around from the laser turrets

In Space

The amount of time you spend actually flying your ship will be determined largely by the number of hostile craft you encounter, or choose to engage in a hostile fashion. Most of the navigation will be performed by the autopilot, now fitted as standard, and a much more versatile and useful piece of kit than the primitive 'Docking computer' you had to save up for in *Elite*. Another especially useful addition to the sequel has been the 'Stardreamer Time Control', a system that will speed up your perception of the passage of time but slow things down again should you arrive at your destination or get into a fight, eliminating those long run-ups to space stations that were so much a feature of the previous game.

cruising the space highways being slightly frustrating and tiresome, rather than – as it was in *Elite* – utterly exhilarating.

This is all water off a duck's back, though, to a game as impassively vast as *Frontier*, and if you're willing to take the time to get used to its peculiarities, you'll find yourself immersed in a whole new world of adventures, dazzling in scope and hopelessly addictive.

On one High Density floppy disk you have, quite simply, an entire universe to explore. Trader? Pirate? Miner? Mercenary? Explorer? Taxi Driver? There is no set goal; it's entirely up to you in which directions you channel your energies. If you want to live in another world, you'll find it here, and *Frontier* may well be the best game you've ever played. If you're just looking for something to pass the time with, however, you won't find any cheap thrills. Get hooked, and you're hooked for good. But there's more attractive bait around.

Edge rating: **Seven/10**

Samurai Shodown

Format:	Neo Geo
Publisher:	SNK
Developer:	In-house
Price:	£185
Size:	118Mbit
Release UK:	Out now

It's something that has almost become a fact of life, and over the years we've all had to live with it. What is it? Well, each and every home system has a game for which it totally excels.

The SNES has its platform games, the PC Engine has more than its fair share of shoot 'em ups, the Mega Drive has an abundance of sports simulations and you can't move for 3D RPGs on the PC. And Neo-Geo owners must have a terrible time deciding which beat 'em up to get next.

Not surprising really, as most of the Neo-Geo's best games come from this genre. *King Of The Monsters 2, Fatal Fury 2, Art Of Fighting* and now *Samurai Shodown*, without doubt one of the best beat 'em ups ever to grace the screen of the Neo-Geo – in fact it's arguably the best one-on-one beat 'em up on any home system.

So what's so special about SNK's latest? Well, its got some knockout visuals, equally impressive sound effects and 12 brilliantly designed characters. Oh, and it plays really well too. But *Samurai Shodown*'s most alluring feature has to be that the characters fight with a range of weapons.

All too often fighting games rely on the tried and tested theme of hand-to-hand combat, but oh no, not *Samurai Shodown*.



Supplied by Zap Computer Games (0532 590077)

Samurai Shodown **has some beautifully drawn characters and backdrops. Here one of the Japanese opponents, Kyoshiro, takes on Galford. Galford's weapon may look small compared with Kyoshiro's, but Galford has a four-legged surprise in store: Poppy – his dog – looks like he's set to pounce**

Special moves











Special moves play an important part in any new beat 'em up. *Samurai Shodown* contains some of the most ingenious yet seen. If you thought that *Street Fighter*'s moves couldn't be beaten, check this out

The **Characters**

Samurai Showdown contains some of the biggest and most vicious characters ever seen in a videogame. But it's their weapons that make them all the more savage. For instance...

Nakoruru, from Japan, is a slight thing but don't let her diminutive size fool you – she's just as merciless as the rest. Her sword is small but she's devastatingly quick.

Galford comes from the USA. He's quite fast and has also brought some extra help with him – his dog. Galford can sink his savage canine into opponents but it's quite tricky to do, so you're better off sticking with his Power Flame to start with.

Haonmaru is almost like a 'Ryu' character, and has a mixture of moves. His cyclone punch is a real punisher and he's also a very accomplished swordsman – unlike...

Earth Quake. Similar to Galford, Earth Quake is from the USA, but unlike Galford he stands around 20 feet tall. His sheer bulk makes him a slow mover, but his weapon – a spiked chain – can be used to keep his opponents at a distance.

Gen-An looks like he auditioned for the part of Blanka, but failed miserably. This green hunchback comes equipped with steel claws.

With painful realism the characters slash and hack their way through each of their fights. And throwing your opponent hard to the floor and then driving your blood drenched sword through him is disturbingly satisfying.

If there's one feature that can best distinguish between a fair beat 'em up and a great one, it would have to be the ability to pull off combination attacks. *Samurai Shodown* certainly doesn't disappoint here. The fighters are fairly easy to control and have a very impressive array of their individual special moves. But it's the way in which you can pull off special moves in succession that makes *Samurai Shodown* so good.

It is without doubt the best beat 'em up currently available on the Neo-Geo, but this comes as no real surprise. A while back SNK managed to entice away some of Capcom's original *SF II* programmers, and it's rumoured that *Samurai Shodown* is the first game they've worked on for SNK.

Together with some impressive zoom in and out effects – similar to *Art Of Fighting*, only a lot smoother – *Samurai Shodown* represents a new breed of beat 'em up. Whether it'll have the lasting appeal of *Street Fighter II* remains to be seen, but one thing's for sure – you'll have a great time finding out.

Edge rating: **Eight**/10



Earth Quake and Gen-An do battle at close quarters (above). Get in close and you're told to hammer the A button (inset). If you're quicker on the firebutton than your opponent, he drops his weapon and is sent reeling, allowing you to step in and take the upper hand

Dracula X: Devil's Castle

Format:	PC Engine Super CD-ROM^2
Publisher:	Konami
Developer:	In-house
Price:	£65 (import)
Size:	1 CD
Release:	Out now (Jap)

Castlevania is perhaps a solitary gameplaying experience, and the popularity of the series certainly eludes a large chunk of the gaming population – let's face it, the somber graphics, the slow, plodding pace, it just isn't *Sonic* is it? But what it lacks in mainstream appeal, it makes up for in its cult look and feel. Challenging gameplay, masses of levels, brilliant haunting music – these are the kind of things that the more serious player appreciates.

And the Engine version packs these elements into an unusual CD bundle adding enough frills to satisfy diehard fans. In fact, the imminent, and very basic, Mega Drive game is well and truly eclipsed by this release.

But it's *Castlevania IV* on the SNES that will probably be the benchmark against which it'll be judged. So is it up to scratch?

On starting the game, there's a typically spectacular anime-style intro, accompanied by unsuitably upbeat music. After that there's a wonderful choirboy's voice singing while you peruse the multitude of options. It's nice to see so much effort going into peripheral screens. But once the game starts it's a different matter. The graphics are okay, but they're just not in that super league we all know the Engine's capable of. It looks a bit flat at the best of times, the colours having been cut down to allow the parallax scrolling.

On the sound side, things are mixed too. Effects are surprisingly good – far more gut-wrenching than in the SNES game, but the music – one of the *Castlevania*'s eternal strong points – is a real letdown, especially when you can get some fantastic orchestral versions of *Castlevania*'s music separately on CD (in Japan). Here, some of the jazzed up

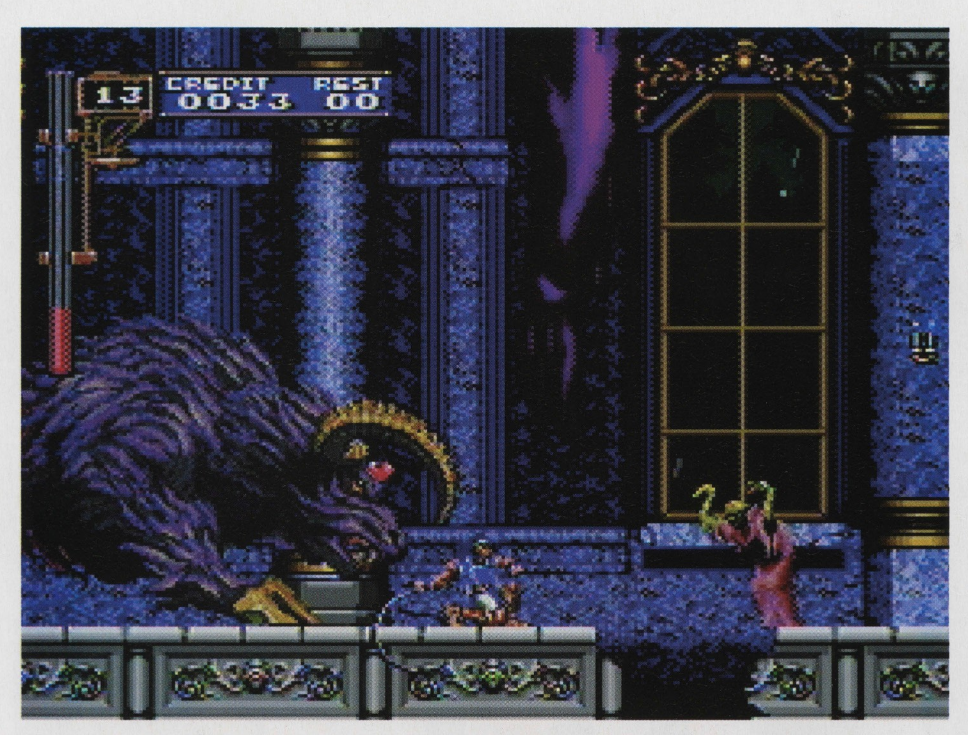


The familiar falling bridge section appears in one of the later stages. It's very nicely handled too



Supplied by Raven Games (081 663 6810)

The game begins with a prologue where our Vampire Hunter rides into town only to be met by Drac himself. The best thing is the great scene-setting sampled rain and hoof sounds played directly off CD



The first decent section involves this animated beast, who smashes onto the left of the screen and chases after you as you negotiate the gaps in the floor. A useful key can be found on this level



Moving ropes with platforms, vertical parallax scrolling, special weapons... it's all here







Bosses

A rock monster (left) looks tough, but a few quick slashes and he's rubble. Find the secret exit on the first level and the boss at the end is this fast twisting serpent (middle). Static screens don't do him justice either – he moves very realistically. A mid-level boss from the third level bursts into flames (right)

remixes of old tunes are just bland, unsuitable, and a far cry from the brilliant atmospheric SNES music.

Fortunately though, *Dracula X* is saved by some really solid gameplay. On the face of things, it seems a bit stale – mainly because of the limited use of your chain, as on the NES. However, the old fashioned gameplay is still enjoyable. Underneath the slightly crusty exterior there's a depth to *Dracula X* – mainly in the game's structure – that makes this a great buy. There are loads of levels in the game, lots of different routes to completing it, and secret rooms all over the place.

If you're a fan of the series, you won't want to miss this. Just don't expect to be that impressed the first time you see it.

Edge rating: **Eight/**10

The Options

One of the most impressive aspects of *Dracula X*, certainly when compared to previous *Castlevania* games, is the wide range of options.

Set against a backdrop of harmonic vocals, the player can view a map screen where individual, pre-completed stages can be accessed. This works well, because you never really know how far there is left to go – the game just seems to keep growing and growing.

Also, there's the interesting Technic option, allowing the player to watch a recording of the strategy needed to kill individual bosses. It costs money, mind, and you can only see the ones you've managed to reach yourself, but for sheer novelty value, it's a nice inclusion.

A choice of characters appears after the girl gets rescued. And the game save – perhaps the most important aspect of the game design – works surprisingly well too. Restart points can be a bit of a pain – only when a level is completed will it register a save, but unlike many games with back-up, Konami have made the game tough enough to sustain interest for a good while. And those different routes traversing the game will take quite some time to get familiar with...

World's

FINEST

What brings you over 100 editorial pages devoted exclusively to PC games?

What brings you giant game previews and interviews with the programmers long before anyone else?

What brings you reviews of every new PC game released in the UK?

What comes complete with a high density coverdisk packed with the best game demos you've ever seen?

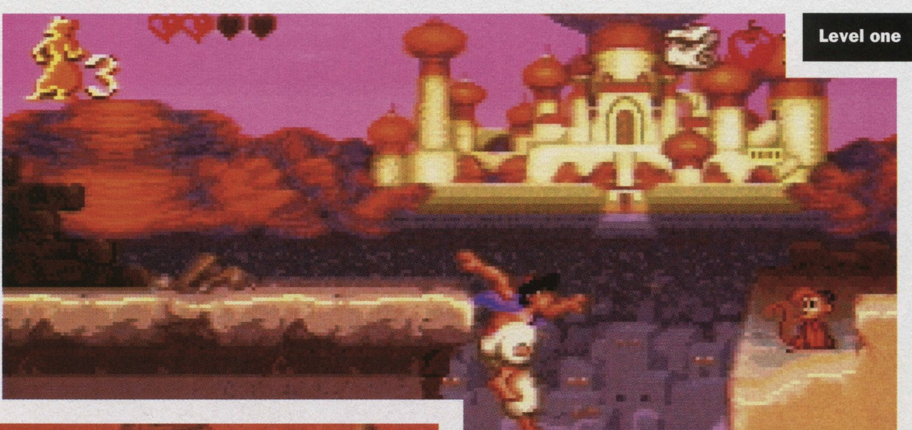
Only the world's finest PC Games magazine



Aladdin

Format:	SNES
Publisher:	Capcom
Developer:	In-house
Price:	£50
Size:	10 Mbits
Release:	December

Level one



'Go on, you can make it!' assures Abu. Aladdin, however, quickly realises not to trust monkeys



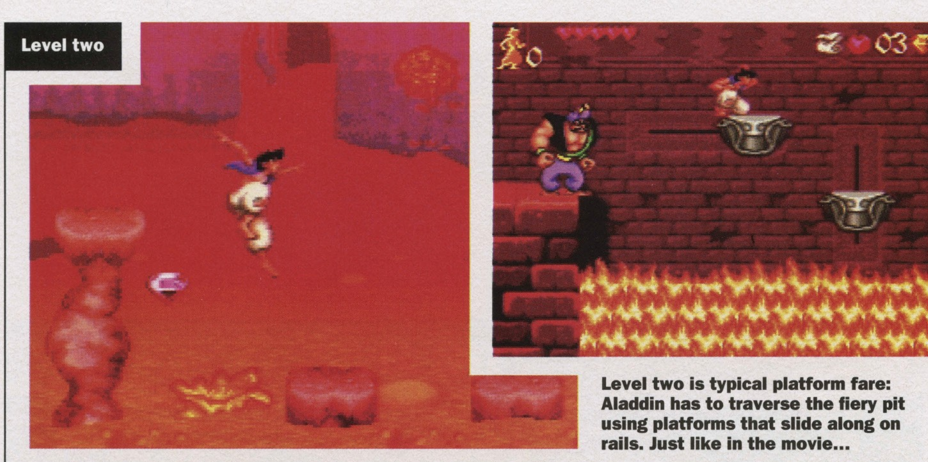
SNES *Aladdin* is far more playable than the Mega Drive version. Here, for example, Aladdin can swing from poles kick the guards. Pity the game has been spoilt by its low difficulty level...

After seeing Virgin's smart Mega Drive version of *Aladdin* running at the Chicago CES last summer, it's rumoured that Capcom went back to the drawing board to improve the animation in their long awaited SNES game. But with the finished game finally here, you can't help feeling that their efforts might have been better directed at some of the game's more immediate flaws. Chiefly its lack of levels. And accordingly, its lack of any real challenge. The game is way too short and horribly easy to finish. And this is a great shame when so many of its other characteristics, notably the gameplay, shine so brightly.

But, despite the challenge factor, is the game as pretty as the Sega version? Does it match up to the high standards set by Virgin and Disney? Well, yes, and... sort of. In terms of game structure, SNES *Aladdin* is basically their *Mickey's Magical Quest* game in a new outfit. There are seven levels, each divided into a few sub-sections, and there are bosses at the end of most levels. Virgin's game saw fit to dispense with such conventions.

But where Capcom's *Aladdin* really scores is with the gameplay – it's a bit more sophisticated, borrowing a lot of its appeal from *Prince Of Persia*-style play mechanics.

So, there's a distinctive Capcom flavour here, certainly. But while it plays absolutely wonderfully, it's also lacking so much. And what it lacks is so fundamental that you

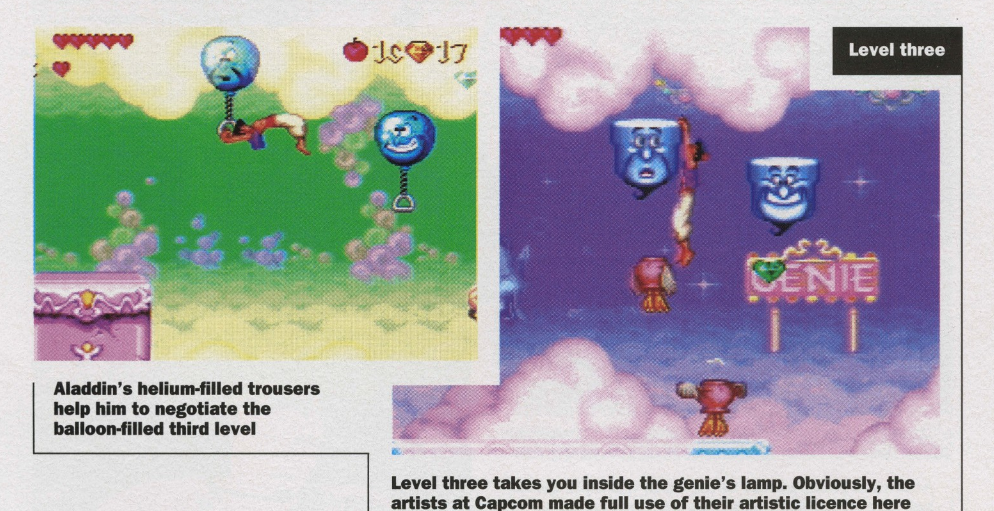

Level two

Level two is typical platform fare: Aladdin has to traverse the fiery pit using platforms that slide along on rails. Just like in the movie...

All seven levels are visually brilliant, but the lava stage is by far the most impressive, with around eight layers of parallax

Control method

After Virgin's brilliant Mega Drive version, this SNES version – courtesy of Capcom – looks just as stunning and plays even better. The only trouble is it's all far too easy. The platforming sections offer nothing new, but Aladdin himself does have a rather unique control method. He can hang from ledges – *Prince Of Persia* style – and swing around on poles. He is very cat-like in his abilities and can cling onto just about anything; very useful if you're falling down a hole.



Level three

Aladdin's helium-filled trousers help him to negotiate the balloon-filled third level

Level three takes you inside the genie's lamp. Obviously, the artists at Capcom made full use of their artistic licence here

Aladdin's levels

Aladdin is split into seven long sections. Each level is split into sub-sections, some of which have a boss for you to deal with. The game starts in the Agrabah Market and is structured very similarly to the Mega Drive version. From here the adventure takes you through the genie's lamp and over Agrabah's rooftops on a Rug Ride, and lastly on to the final battle with a huge snake. Each section has its assortment of baddies, but by far the most common are the sword-wielding Palace guards.

wonder what Capcom are playing at. It's hard to believe that they could mess up *Aladdin* when they've had so long to work on it.

Mickey's Magical Quest, another platformer that lacked content, fared better because it had more variety and detail in the individual levels. Sadly *Aladdin*'s levels are quite sparse in places; one entire level is wasted on a flying carpet bonus section. Just as bad is *Aladdin*'s soundtrack – a dismal warbling rendition of the film music, using exactly the same sounds used in every Capcom SNES game ever.

In many ways the problem with *Aladdin* is integral to the licence. It's a mainstream property so it has to be geared to satisfy the casual player first. And the big drawback with this is that it makes the game way, way too easy. We finished all seven levels in just one hour of intense playing – that roughly equates to a pound per minute. Fun while it lasts, but it doesn't last long enough. E

Edge rating: **Six/**10


Level four

Aladdin expertly negotiates moving platforms in the fourth level (above). A flying carpet sequence (inset) breaks up the action quite nicely, but is a simple collect 'em up. Aladdin is forced to go with the flow in the sand stage (right), where streams of silica drag him along or hinder his progress

Joe Montana's NFL Football

Format:	Mega CD
Publisher:	Sega
Developer:	In-house
Price:	£45
Size:	1 CD
Release UK:	Out now









Four different viewpoints show off the sprite scaling capabilities of the Mega CD, but are only accessible in Action Replay mode, and are, as such, a little useless



American Football has never been a simple game, but this conversion does the sport no favours

What was clearly designed to be a much-needed showcase for the Mega CD's technical prowess has instead served to highlight the faults of the machine.

Presumably sick of complaints that most of the previous Mega CD games could have been executed just as interestingly on cartridge, Sega have pulled out all the stops to prove their machine worthy of its price tag. All the technical resources of the hardware have been used: commentary and music pulled directly from the CD; sprite scaling and rotation; even CinePak video technology. It's a great idea, let down only by the fact that it's so hopelessly executed.

There are two glaring and insurmountable problems. The sprite scaling and rotation, all handled by the Mega CD's hardware, is jerky and at times surprisingly blocky. The players move slowly and are unresponsive – a major flaw in a sports sim – and frequently muddy together in a confusing mess.

Even more frustrating, though, is the pointlessness of all the 'atmospheric' additions. The digitised commentary serves no real purpose, and the CinePak video footage of John Montana providing playing hints is grainy and worthlessly inadequate. Even the 3D pitch was more convincing in the cartridge-based *John Madden* titles.



During a time out you can call on Joe to proffer advice. The CinePak is smart; his advice isn't

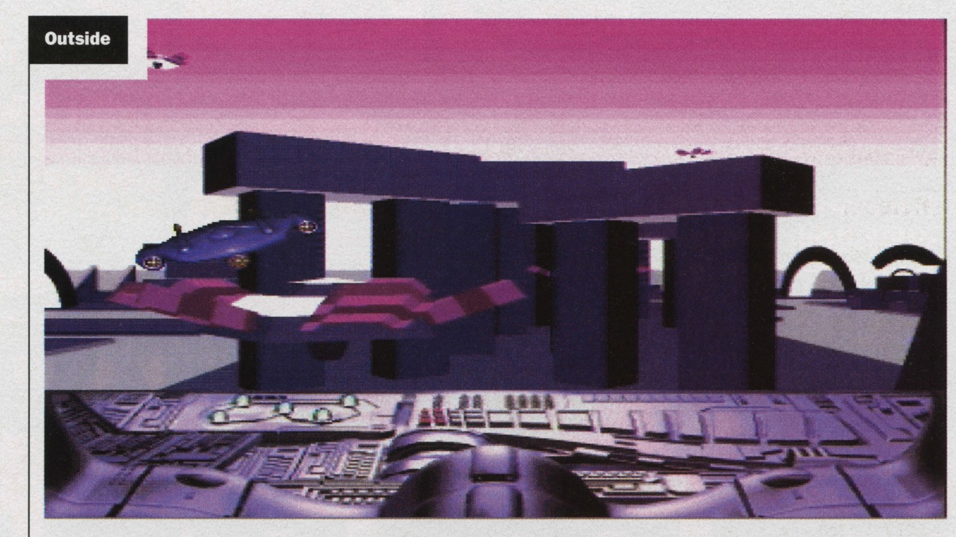
Some effort has clearly been laboured on *Joe Montana's NFL Football*, but all to little avail. It fails to outperform its competition on graphics or gameplay. And to sacrifice playability for unconvincing cosmetics: is this really all we can expect from the next generation of CD products? E

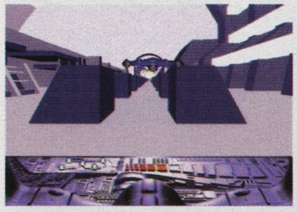
Edge rating: **Five**/10

Kether

Format:	CD-i
Publisher:	Philips
Developer:	Infogrames
Price:	TBA
Size:	1 CD
Release:	Out now

Outside







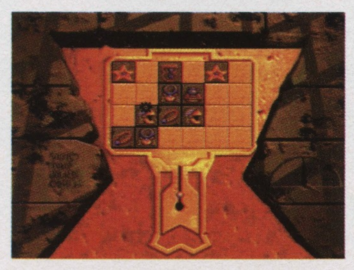


The 3D flying sections are very impressive and full of imaginative touches, but because the images are constantly being 'pulled' off the CD, there's no freedom of movement. Your craft can move around the screen but like *Silpheed*, your path is predetermined and there's no way of going off the 'rails'

Inside







The 3D section includes ghostly apparitions (top) and puzzles (bottom), but the 3D walkabout isn't fullscreen and is quite jerky (middle)

The very thought of traversing through an alien infested galaxy in a highly manoeuvrable space craft, will no doubt send some of you into a state of mental frenzy. And *Kether*, on the good old Philips CD-i, offers this and a whole lot more.

Using the old 'rescue the kidnapped princess' idea, *Kether* has little in the way of a scenario. What it does have though, is some fantastic 3D flying sections, the first of which – the asteroid field – will have you ducking and weaving in your chair. The other four flying sequences in the game are just as impressive and the overall quality and speed of the graphics is quite sensational. The only shame is that all the images are just streamed off CD so there's no genuine freedom of movement and you can't actually shoot anything.

These flying sequences still look spectacular – and they do have another purpose. Your character, Mekhor, has to fly from planet to planet in search of Princess Eta. When you arrive on a planet the game turns into a 3D maze. In these sections you have to search around the corridors in search of five valuable objects. The 3D update here is quite jerky, but the eerie background music helps add that much needed atmosphere.

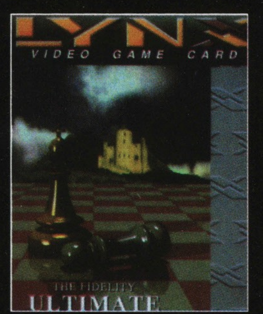
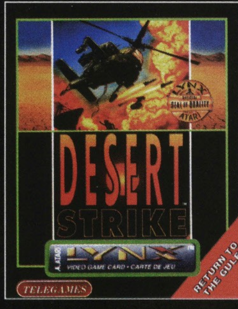
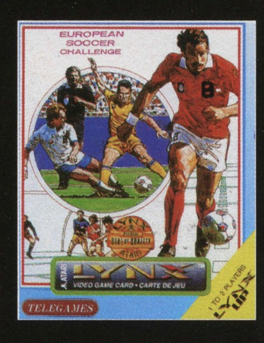
Together with some smart presentation screens and a two hour music score, *Kether* is a very polished product. It's not quite the 'frenzy inducing' game you initially think it is – the action is a little limited – but it's all brilliantly portrayed.

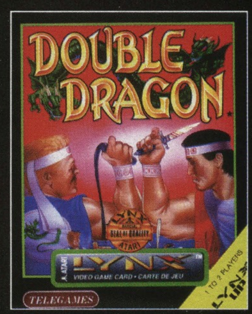
After a very shaky start the CD-i is finally getting some quality software, and *Kether* joins *Inca* and the more recent *Voyeur* to form the 'better' brigade. This merry band of titles shows what the CD-i is capable of, and what with *Microcosm* and *The 7th Guest* currently getting the FMV treatment, the future of the CD-i is looking brighter.

Edge rating: **Six**/10

TELEGAMES

Europe's largest selection of video games – the world's largest 3rd party Lynx producers

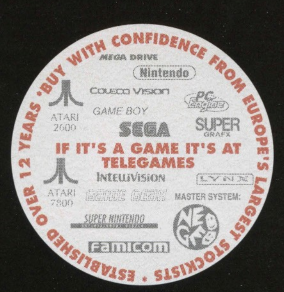


Lynx titles available from all good computer shops. **Lynx** plus all game systems items available at our superstores:

Haymarket Centre – Leicester
Kilby Bridge, Wigston – Leicester
Rivergate Centre – Peterborough

Jaguar – call or phone

New **Atari 2600/7800** games in stock



Lynx Skin – Lynx II

Carry case with free headphones special offer **£39.99** with **any** Lynx game free (state free game req)

Enquires and mail order same day despatch

(0533) 880445/813606

or post to: **Telegames**, Wigston, Leicester, LE18 3TE




Cash/Cheque/Postal orders send **SAE** for full price list to address above (state system required)

Dealers and Traders

The Video Game Price Guide for less than £2.50 a week. We will provide you with the latest prices of Sega and Nintendo games every month

Trade Only

Compuland,
96 St.Martins St,
Portsmouth SE1 1ZX

Dealers and Traders

The Video Game Price Guide for less than £2.50 a week. We will provide you with the latest prices of Sega and Nintendo games every month

Trade Only

Compuland,
96 St.Martins St,
Portsmouth SE1 1ZX

Dealers and Traders

The Video Game Price Guide for less than £2.50 a week. We will provide you with the latest prices of Sega and Nintendo games every month

Trade Only

Compuland,
96 St.Martins St,
Portsmouth SE1 1ZX

Dealers and Traders

The Video Game Price Guide for less than £2.50 a week. We will provide you with the latest prices of Sega and Nintendo games every month

Trade Only

Compuland,
96 St.Martins St,
Portsmouth SE1 1ZX

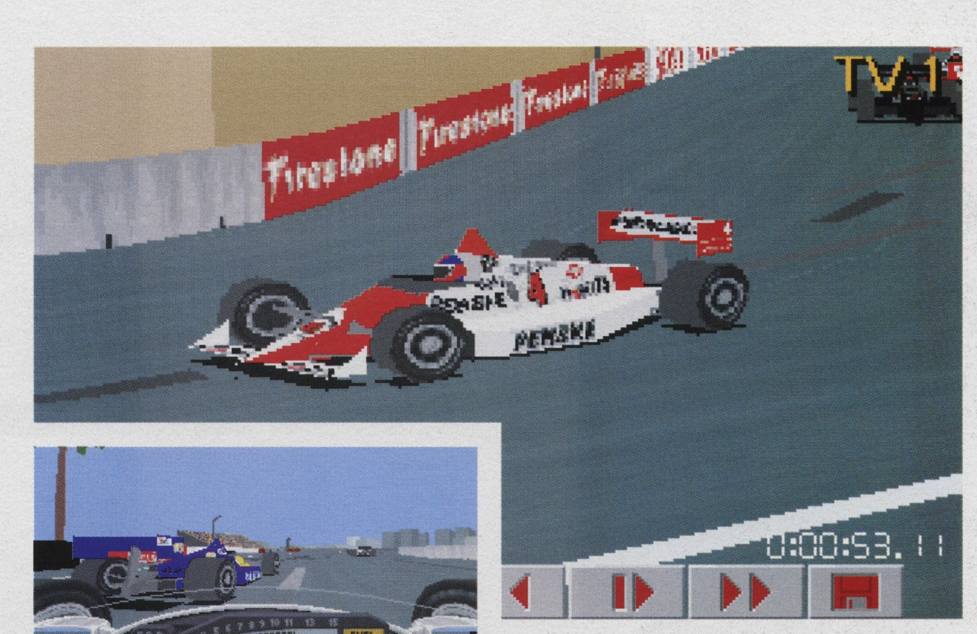
EDGE Directory

Commencing next month **Edge** starts a new section simply called **Edge Directory** – a series of 16th page adverts, providing an ideal opportunity to reach the right buyers. **Edge** is written and designed to appeal to an elusive audience, previously untapped even in this crowded market. By covering the major videogame formats and new hardware platforms **Edge** provides an excellent arena for reaching an elite group: discerning gamers with a desire to get hold of the very latest games and machines. Give yourself an edge: advertise in the **Edge Directory**.

To get in **Edge Directory** talk to **Jane Geddes** on **0225 442244**

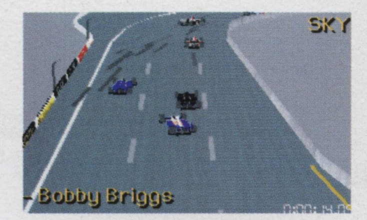
IndyCar Racing

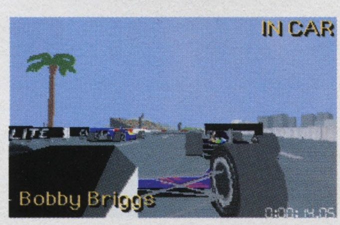
Format: PC
Publisher: VIE
Developer: Papyrus
Price: £50
Size: 3 disks
Release UK: 12/93



The view from inside your car shows what lies ahead. You could make some progress if those Sunday drivers would get the hell out of the way

Crank everything up and the game looks stunning without losing much speed. A real technical triumph







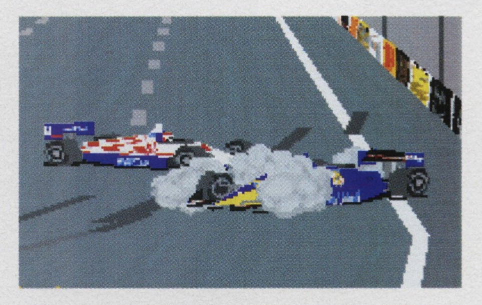
***IndyCar* comes with a good choice of views. (Bottom) This is the view from the blue car's gear box and that's your car about to give it an almighty shunt up the rear...**

For years, PC owners thrilled to the obsessive delights of *Indianapolis 500*, but allegiances were switched to what was regarded as the definitive realistic driving simulation, MicroProse's *Formula One Grand Prix*. Now, with powerful processors and fast graphics cards readily and cheaply available, a new standard is about to be set.

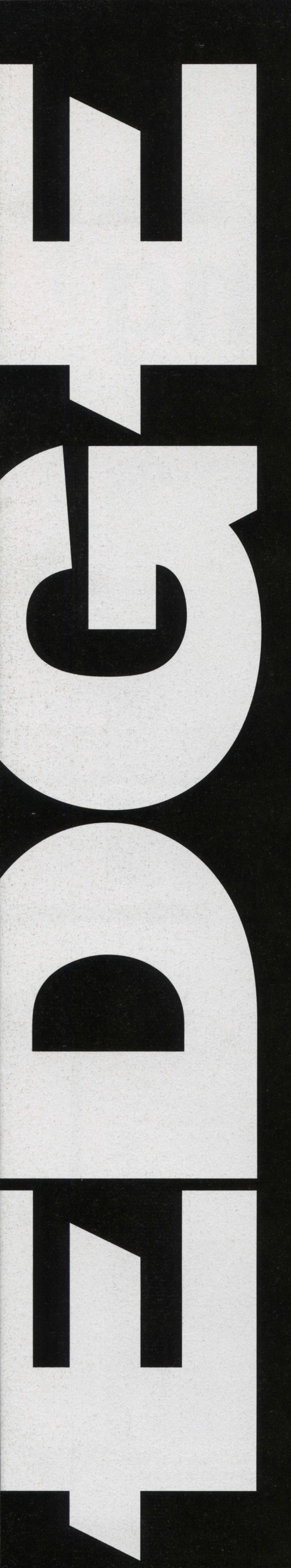
IndyCar Racing is one of the most complete simulations you'll find on any format. The attention to detail in every aspect of the game is quite incredible, but it's also completely flexible. You get the chance to go for an arcade-style foot-to-the-floor joyride as well as a seriously realistic championship season.

When you climb behind the virtual wheel for the first time, you can't fail to be impressed by the way the game looks. The graphics are not only amazingly detailed, with texture maps wherever you look, they're also delightfully smooth. The impressive detail extends to the gameplay as well. You don't just choose which car to drive, you can decide which combination of chassis and engine you want. *IndyCar Racing*'s attention to detail is daunting, but it doesn't just throw you in at the deep end. The game's so user definable that you can make the gameplay as simple or as sophisticated as you like. So if you're left cold by the instant delights of the likes of Lotus and Jaguar on the consoles, *IndyCar Racing* has enough depth and realism to roast you alive. E

Edge rating: **Eight**/10

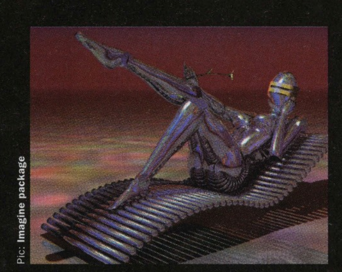


The only thing *IndyCar* doesn't simulate is irate drivers cursing their opponents after a scrape



Recommended
reading

In which we preview a few of


Pic: Imagine package

Magazine: **Amiga Format**
Format: **Amiga**
Price: **£3.95**

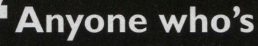
'**Everybody** knows that the future of videogames is three dimensional. With hot new properties such as *Lawnmower Man*, *Microcosm* and *Rise Of The Robots* all about to hit the streets, and all owing more than a little to 3D modelling and raytracing for their graphic excellence.
Now Amiga Format isn't just a magazine for watchers (or even players) it's a magazine for doers too. And this issue we're showing you how to do 3D graphics with six pages of step by step tutorials. We're even bunging **Imagine**, a £269 professional 3D raytracing package, on the cover, so there are no excuses for not giving the most interesting area of computer graphics a try.
So don't miss it. You never know... the next 3D games masterpiece could be your own. Amiga Format December 1993... onsale now!'

Marcus Dyson, Editor



Game featured: FIFA International Soccer

Magazine: **Mega**
Format: **Mega Drive**
Price: **£2.50**



'**Anyone who's** serious about Mega Drive and Mega CD gaming really shouldn't miss issue 15 of MEGA. For a start we have a major feature about the death of the import game and investigate how Sega succeeded in practically destroying the import market. Beyond that we have reviews of the two best football games of all time, **FIFA International Soccer** from EA and **Sensible Soccer**. *Sonic* fans are also catered for with the excellent *Sonic Spinball*. And although many people are sick of hearing the name, *Street Fighter II* buffs can occupy themselves with our six page player's guide. Of course we'll also have the usual mix of interviews, news, tips and crap jokes which all adds up to a right-rivetting read. Just do it!'

Andy Dyer, Editor


Game featured: Cannon Fodder

Magazine: **Amiga Power**
Format: **Amiga**
Price: **£3.95**

'**Amiga Power** is the bestselling Amiga games magazine in Britain. Within our splendid cover you'll find a review (however small!) of every single Amiga game released this year, as well as bite size chunks of info on old releases, and news on what the developers have got up their collective sleeve. For up-to-the-minute news on what's going down out there in Amigaland you can't do better than flick through our news pages – if something's happening that you should know about, this is where it'll be. For those of you who need a helping hand, check out our tips pages – if our tipspert can't help you then no doubt someone out there can.

When you buy a copy of Amiga Power, you're not just buying a good read: you're buying a place in a massive nationwide, nay – worldwide, user group. Take advantage – take Amiga Power!'

Linda Barker, Editor

the other Future videogame magazines


Game featured: Shadowcaster

Magazine: **PC Format**
Format: **PC**
Price: **£3.95**

Texture-mapped graphics, eh? You can't live with them, you can't make state-of-the-art games without them. You also can't read the December issue of PC FORMAT, without seeing them in **Shadowcaster**, Origin's latest smoothly scrolling RPG, and Frontier Elite 2. (Has David Braben just wasted the last five-and-a-half years of his life?) We also show you how to avoid getting ripped off when buying the latest PC hardware, and interview Alien Sex Fiend to find out just why they made beautiful music for DID's forthcoming *Inferno*. Then we reveal 10 ways to improve your PC's performance without breaking the bank. With all that plus reviews of more than 30 games, and Coverdisk demos of *Alien Breed* and the new *Syndicate* missions, it's easy to see why PC FORMAT is the world's best PC leisure magazine. Get to your local newsagent on 25 November and find out for yourself.

Mark Higham, Editor



Magazine: **Sega Zone**
Format: **Sega**
Price: **£2.50**

You know how most magazines these days claim to have the 'world exclusive' first look at some game or other, when what they really mean is that their story appears three days before someone else's. Well, bizarrely, Sega Zone have managed to get the only real exclusive you'll see this winter. Imagine a game faster than *Road Rash 2*, more violent than *Street Fighter II*, and altogether nastier than *Sonic The Hedgehog 2*. It's from Electronic Arts, it's going to be massive, and it's going to be in Sega Zone first.

If you want a well-written, informed and entertaining alternative to the usual run-of-the-mill Sega mags, rush out and buy Sega Zone. We put things into some sort of perspective or other.

Tim Norris, Editor


Game featured: Super Street Fighter

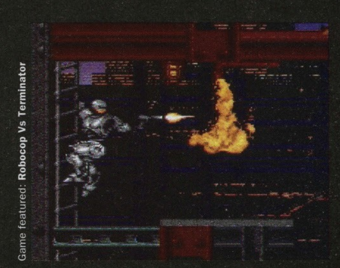
Magazine: **Total!**
Format: **All Nintendo**
Price: **£2.50**

This month in Total, Virgin enters the UK scene with their latest and perhaps greatest title to date; the awesome *Cool Spot*.

For all you **Super Street Fighter** fans-in-waiting, we have the biggest, most in depth feature on the coin-op so far. It features interviews with Capcom programmers, profiles on the new characters and dozens of screenshots. Total actually got the chance to play the machine before it was released. A Super NES version will be released sometime in late 1994 and it promises to be a massive 32 Meg cart – the largest ever.

We'll also be taking an in-depth look at *Mega Man X*, due for release early next year, we'll have full reviews of *Super Empire Strikes Back*, *World Heroes* and *Lawnmower Man*. A special report on the latest games from America and some shock news about the future of the NES. Issue 24 will be onsale November 18. Make a date.

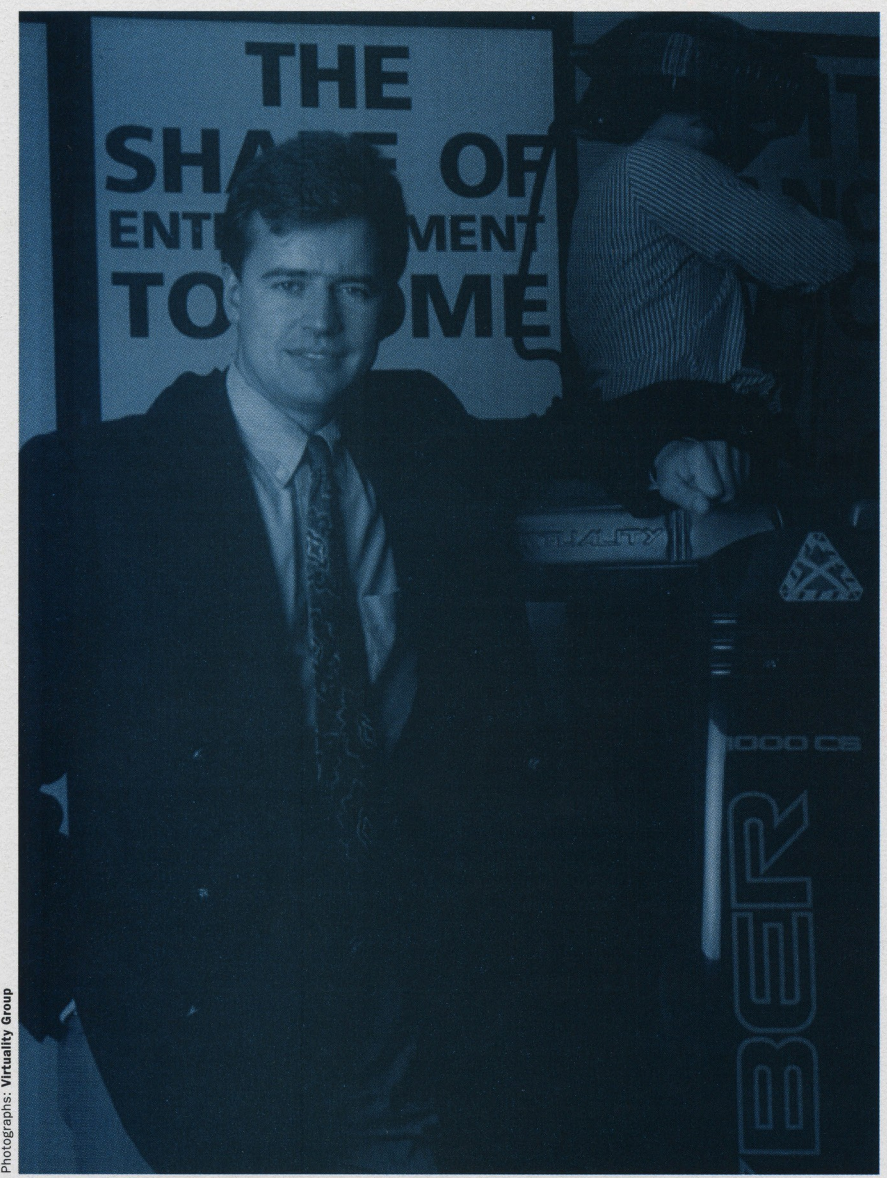
Frank O Connor, Editor


Game featured: Robocop Vs Terminator

Magazine: **GamesMaster**
Format: **Multimedia**
Price: **£1.95**

We don't scratch chins here at GamesMaster, we involve them in sharp and sudden impact with a variety of blunt objects. Fists, feet, amusingly unlikely balls of fire – that sort of thing. We're talking beat 'em ups. Games involving clanging, clashing one-on-oneness. Had enough of them yet? You love it really. You'll love **Robocop Vs Terminator** (Mega Drive, SNES). You'll adore *Legends Of The Ring* (SNES). You'll positively eroticise *World Heroes* (SNES). You'll salivate embarrassingly over our features on *Rise Of The Robots* and *Dragon* (all formats). You may well have some form of underwear-related mishap over our straight, no-nonsense look at 3DO, over our reviews... Oh, and then, there's a big *Cool Spot/Robocop Vs. Terminator* poster. And... Oh, look. Just buy it, okay? Please! We're really skint and everything. It's great value. 148 pages. Only £1.95! 18 November. Do it!

Andy Lowe, Editor



Photographs: **Virtuality Group**

Dr Jon Waldern – the man behind the W Industries/Virtuality name. The company is currently working on VR coin-ops with Sega, and is soon to announce details of a home VR system...

An audience with: Jon Waldern

The man behind the next generation of VR systems talks to **Edge**

In an age of domination by the Japanese and the Americans, the UK's own W Industries are a big success story, occupying a unique slot as one of the most fruitful high tech businesses of the last five years. The man behind this success – the W in W Industries – is Dr Jon Waldern. **Edge** decided it was time for a chat with the good doctor.

Jon Waldern set up W Industries (who trade as Virtuality Entertainment Systems) to make commercial state of the art VR systems available and make them an industry standard.

W Industries started small, and they're still small. A medium-sized industrial unit in a leafy suburb of Leicester is the sum total of the W Industries empire, and that's all it needs to be. They sell quality, not quantity. Small in stature, but big in business. Or something like that.

John Waldern is not an imposing figure, but has an efficient air about him. He's younger than you'd expect, and despite the serious big business front end you occasionally see a flash of wry humour – the young windsurfing micro-electronics degree student underneath…

Edge So Jon, what preparation did you have for W Industries?

JW My first degree is in micro-electronics and computing, and my other degree is industrial design engineering. My PhD is in computer science. As you can see it's been a fairly technical orientation through the years. That and gathering the necessary 'skill sets' in preparation for founding Virtuality Entertainment Systems. It's kind of a long term plan, and it's still early days.

Edge Looking at your products, this was obviously the job you were made to do, what with your design and technical skills.

JW I've worked in Virtual Reality since 1981, I basically chose to develop my ideas when I started my PhD. Prior to that as a design engineer I was using CAD systems, and thought they were the most appalling products ever. It was really at that stage I became very interested in new ways that we could use computers to aid the design or creative processes, and to visually see and interact in a 3D data set, which is fundamental to VR.

Edge How long has WI been going?

JW Since 1987, but we really got going on Virtuality mid to late 1988. It took quite a while to raise the funds to get underway.

Edge So you developed your ideas before you developed the company?

JW Very much so. The concept was to

develop the idea, develop the full prototype to sell the idea, sell the idea and plan the company, and raise the money.

Edge So how far down the road are you?

JW Oh it's not THAT long term, it's just to the end of the decade. But in computing terms it's still very, very long.

Edge Eons, eh?

JW Exactly. Where we are now is just a small snapshot in that domain. Virtuality has a long way to go yet.

Edge How did the company start then?

JW Literally with just a few guys that I knew. One of the first employees was a buddy of mine called Richard, we used to windsurf together. He and I have known each other for a long time. He's head of product design here. We only have 70 people working here in total, which is really quite tiny compared to some of the companies we're working with.

Edge High tech companies don't have to big, then?

JW No, the reverse. It's bad to have a big overhead. Lean and mean is the phrase.

Edge You started out as a programmer, designer and windsurfer, now you're the CEO running the business. How do you like the way your job has changed?

JW It's very important, I think, in high technology business to have CEOs that actually understand the issues.

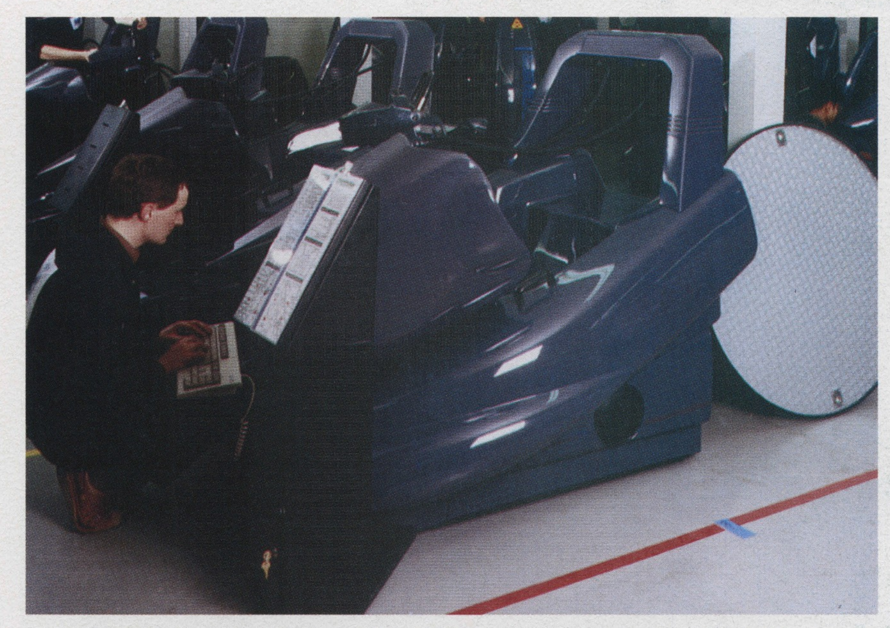
Edge How big is the company now?

JW We have the largest user base for Virtual Reality systems in the world... which really is an indictment of these early stages of this industry rather than a reflection of our success! (laugh)

We have a turnover in multiple millions, last year our recorded turnover was just under £6 million. This year, we're expanding rapidly. It's very much an international business, very little is sold in the UK. In financial terms, the net worth of the company is way in excess of its trading activities. We spend over £1 million in pure research and development on just VR.



The Virtuality 100SU allows interaction with a virtual world via a hand-held controller



An engineer on the production line at W Industries runs a last-minute systems check on one of the Virtuality sit-down coin-op machines, before it is shipped off to its LBE destination

Key licensing contracts like the one we just did with Sega are of critical importance. For example on one Sega deal I earned more revenue in profit terms than on the entire year's activities last year.

Edge What exactly is this Sega link up?

JW We're helping Sega get into Immersive Virtual Reality (IVR), and in particular we're licensing our operating system to them. Also we're providing and writing all the games to go on their new platform. It's a key strategic deal. There's us, Sega and Martin Marinetta (General Electric of the US) involved in the link up.

Edge Was this the VR stuff that Sega were showing at a recent show in the US?

JW No that was their home system, which is a quite constrained, low tech version of Virtual Reality. We are also working on products for the home, and they will come through quite quickly.

Edge So what are you working on?

JW Principally what we call LBE, which is Location Based Entertainment. Sega have got 50 centres in Japan, they'll have hundreds in Europe and the same in the US. They're all sites for our products.

Edge So how long before this happens? How long before we can walk up and put a coin in one of these new machines?

JW Next year, early next year.

Edge Are the machines nearly finished?

JW No. Still very much under development. One of the unique things we have here is quite an advanced toolset, which allows us to author VR experiences very rapidly and cheaply. It's the power of the toolsets and the authoring capability that give us a competitive edge.

Edge Are you making the coin-op machines for Sega?

JW We make the software for them. They make their own electronics... very powerful electronics.

Edge How much are Sega paying you?

JW The Sega deal is worth £3.2 million over two years to start with, and about £1.3 million after that.

Edge Right... And have you licensed your technology to anyone else? Is this a direction you see the company going?

JW Very much so. We're working on a number of key licensing deals at the moment, and we will be announcing them later this year. Technology licensing is something we're now doing more of, especially for our advanced systems. The thing we're licensing is our development environment, so other software houses can develop Virtuality experiences.

Edge Is that going to be available on a range of platforms?

JW No, primarily PC.

Edge Have you been looking at some of the new platforms which have come out over the last few months, CD based consoles perhaps?

JW Er, Yes.

Edge Any particular ones?

JW We will be making some announcements, especially with regard to the home.

Edge That's very enigmatic of you. How

Continued next page

interview



A scene from *Dactyl Nightmare*, a virtual arena in which you have to shoot virtual pterodactyls that swoop down on you. The interface allows full 360 degree vision and control of your gun

Continued

easy is it to make a home system do what a Virtuality system does?

JW I was told by a very famous guy once that what's in the arcade one year you can pretty much expect 3-4 years later to be in the home, in terms of technology... I think he's out of date!

Edge So how long is it going to be before the graphics that a Virtual Reality system shows look almost completely real?

JW That's what we call second generation. We should have machines doing that around the middle of next year.

Edge You're involved with LBE through Sega and the other folks leasing Virtuality machines for coin-op purposes. Are you going to be interested in actually operating your own Virtuality centres in future?

JW We always said when we started that we'd never get involved in operation. But it's fair to say that we feel that people are just making too much money out of our systems... so we may just gét into operation. But on an 'arm's length' basis.

I think the Virtuality centres we have throughout the world are a good start. It's been fabulous for teaching people about VR, letting them have a go, try it out, experience what's different, and set an educational path to the next generation where we're going to deliver a very much higher fidelity experience.

Edge That must be one of the most tricky things, really, because unless someone actually puts on a head mounted display and does it, it's very hard to put across what the point of it is.

JW Very true. You have to get into it to understand it. Some of our experiences are much more successful than others. We're very much experimenting, trying it out. We're making sure we can provide a full suite of well supported tools to allow other programmers and other creative design houses, games companies etc, to get access to the system.

Edge Are you doing any work with movie companies, like product placement etc?

JW I've been a little conservative about that in the past. I mean, Lawnmower Man, we did all that pilots for that. We worked a lot in Hollywood to help the distributors understand what the hell VR was, let Paramount understand it, and we used the machines in the launch of the film. I think that sort of 'VR, gee-whizz, wow' era will ease back a little bit, and what we're into now is great content, like 'I want to be IN Jurassic Park...' Somebody wants to make it on celluloid, fine. We want to make it in VR. We are achieving this aim, as we'll be announcing shortly, but there's a tremendous opportunity to create some really compelling licensed products, conversions for immersive Virtual Reality.

Edge There's a lot of new graphics technology, like the 'metaballs' techniques they used in Jurassic Park, for example, which is making real time 3D graphics very exciting. Are you using techniques like this?

JW These are tools, that are allowing people to describe complex movement and complex animation. We actually are critically involved in that, right now.

Edge As for home systems, have you seen the Amiga CD^{32}?

JW Let me guess: a 32bit Amiga with a CD stuck in it?

Edge Yup. But Commodore did imply at the launch that their expansion socket would enable applications such as 'Virtual Reality' to be added to the system. What do you make of that?

JW Probably some little 3D accelerator. You're gonna need a pretty powerful chip. Still, there *are* some architectures around that are starting to look very exciting.

Edge Anything in particular you can tell us about?

JW (wry grin) There *are* some architectures around that are starting to look very exciting. (laugh)

Edge Okay, CD based?

JW CD is a very useful storage medium, but it doesn't hold a great deal of impact for VR. Apart from mass storage of data for things like textures etc. We use CD-ROM and always have for all our actor's voices and things like that. All our games are based on CD-ROM, and we've been using it for three years now.

Edge So if VR is the generation beyond the current 'multimedia' trend, you aren't looking at current platforms to support VR for the home?

JW Hmm, no comment. (grin)

Edge Thanks, Jonathan.



Next time...

Following the success of our Core Design article in issue three, where an **Edge** reader helped us out with the interview, we've decided to repeat the experience. So another **Edge** reader will be accompanying us on our next two interviews: with **Archer Maclean** (the man behind *Super Dropzone* on the SNES), and with the programming team at **Argonaut Software** (the designers of Nintendo's Super FX chip and the programmers of *StarWing*).

All you have to do is send in one question for either one or both of these interviews. And if you ask the best, most searching, question, you'll be the one to do the interview...

Lastly, if you can suggest someone to be interviewed in a future issue, then that would be very welcome, too.

Address your questions to **Edge**, 30 Monmouth St, Bath, BA1 2BW.

Top Computer Artists

We are currently seeking additional **Graphic Artists** to be original and creative at our idyllic Warwickshire offices.

You must be experienced with **Deluxe Paint, 3D Studio, digitisers, scanners** and **24-bit graphics packages**.

An ability to create game backdrops, animate sprites, design presentation screens and model 3D objects is crucial.

Achieving the highest quality is essential.

Join our team and you could be working on the new **Jaguar Console** or on our next arcade products.

Contact: **Chris Gibbs** on **0926 843444**

or send **CV** to **Attention To Detail Limited,**
Unit 3, Nunhold Business Centre,
Dark Lane, Hatton, Warwickshire CV35 8XB

ANSWERS RECRUITMENT

Specialist Consultants to the Computer Leisure Industry

Working on behalf of leading Leisure Software Industry games publishers we are constantly looking the following :

- SOFTWARE DEVELOPMENT MANAGERS
- PRODUCERS
- PROGRAMMERS
- GRAPHIC ARTISTS

Graduate trainees to experienced games programmers and artists, across all formats, always needed.

Please apply in writing with full CV or call for a confidential chat

Answers Ltd,
Anderson House, 50 Bridge Street, Northampton NN1 1PA
Tel: 0604 603249 Fax: 0604 36961

RARE, formerly known as ULTIMATE PLAY THE GAME, has been producing state of the art entertainment, for over a decade, including the award winning Battletoads series.

To further our expansion, we require talented, creative and enthusiastic people to join our dedicated in-house team, working at our offices in pleasant countryside surroundings.

RARE
DESIGNS ON THE FUTURE

3D MODELLERS We need a number of artists to undertake 3D modelling using Alias software on the new Silicon Graphics workstations we have recently added to our extensive network

DESIGNER/STYLISTS Creative designers are required to style the visual appearance of environments and characters

ANIMATORS Previous experience in the field of animated TV/Film/CD/ROM an advantage

MUSICIANS Natural talent is all that is required!

PROGRAMMERS Games players experienced in Assembly language required for video games development. Unix/C necessary for systems programmers.

All applications and enquiries in writing please to
Carole Stamper,
Rare Limited,
Manor Farmhouse,
Church Street,
Twycross,
Warks
CV9 3PJ

WANTED!

SOME OF THE BRIGHTEST MINDS IN THE INDUSTRY TO WORK ON A SERIES OF IN-HOUSE AND FREELANCE OPPORTUNITIES

*** PRODUCERS ***
*** PROGRAMMERS ***
*** 3D PROGRAMMERS ***
*** GRAPHIC ARTISTS/ANIMATORS ***
*** DESIGNERS ***
*** SOFTWARE DEVELOPMENT MANAGERS ***
*** PROJECT MANAGERS ***
(Salaries range from £10,000-£40,000)

Successful applicants will work on State of the Art Technology, receive attractive salaries and excellent company benefits.

Aardvark Swift's client base ranges from small software development teams right through to some of the world's leading leisure software publishers based in various locations throughout the UK, including: North East of England, North West, Yorkshire, West Midlands, East Midlands, London, South East and the South West.

To be considered for any of the above positions, you must have completed at least one commercial product and possess the relevant technical or managerial skills.

If you are currently seeking alternative employment or just fancy a change then forward a CV to Stephen Lloyd Davies at:



**Aardvark Swift Ltd (Games Division)
75-77 Station Street
Swinton
South Yorkshire S64 8PZ.**

Alternatively telephone: (0709) 571441, fax: (0709) 586527

(The service is free of charge to candidates and all applications will be treated in the strictest confidence).



Specialist Recruitment Consultants for the Leisure Software Industry

We are currently working for some of the world's leading Leisure Software Publishers, based in various locations throughout the United Kingdom, including: ***Yorkshire, Cheshire, Gloucestershire, Scotland, Cambridgeshire, London, Birmingham, Warwickshire, Surrey, Manchester, West Midlands*** *etc... etc... etc...*

There are positions available to work on all formats as follows:

PROGRAMMERS	£14,000 - £27,000
3D PROGRAMMERS	£18,000 - £29,000
GRAPHIC ARTISTS	£12,000 - £23,000
ANIMATORS	£18,000 - £27,000
MUSICIANS	£13,000 - £18,000
PRODUCERS	£27,000 - £34,000

For more details, contact us in complete confidence on: ***0924 254467****, or send your CV to:* ***Zodiac Pursuit, 16 Colleen Road, Durkar, Wakefield WF4 3PX***

◆ ◆ Career Opportunities ◆ ◆

Are you restless? Under utilised? Underpaid? Find out what opportunities there are on an informal basis. Contact us in complete confidence.
Our current vacancies include:-

Senior Programmer - Surrey *68000 skills. Established company.*	**c£25k**
Programmers - Slough *PC, Nintendo, Sega skills all required.*	**£16-28k**
Senior Programmers - Dorking *CDROM skills. Expanding publisher*	**to £28k**
Console Programmer - London *Must have a published game to his/her name.*	**£30k**
Artists - South *Various levels. 3D animation skills sought.*	**£12k, 16k, 18k**
Artist - London *Someone with games experience.*	**£14-22k**
ASS Producer - London *Experience required. Early promotion expected.*	**£15-18k**
Producers - Midlands *Ideally from a development background*	**£17-22k**
Artists - Midlands *Various levels. 3D animation skills sought.*	**£12k, 16k, 18k**
Senior Producer - Cambridgeshire *Well established company. Strong management.*	**£27k**

The next step is to telephone Justin Hill or send your CV to:-



**Games People
Datascope Recruitment,
36 Langham Street
London W1N 5RH
Tel: 071 580 6068**

PRODUCERS - London



£ Competitive

Our client is part of a multi-million pound international group which is a market leader in leisure software and home entertainment. Sega is an acknowledged expert in producing remarkably entertaining leisure forms. The group has a record of consistent profits growth and strong R&D. They are looking to recruit additional producers for games on platforms including 8-bit & 16-bit consoles and CD formats. These are key positions with a key company in the industry.

Suitable candidates should fit the following profile:-

- ★ *Knowledge of and enthusiasm for the consumer software market.*
- ★ *Proven project management skills.*
- ★ *Product design or development skills in conjunction with technical awareness.*
- ★ *Good interpersonal skills.*

If you wish to be part of the industry, please send your CV to Julien Hofer:-



**36 Langham Street, London W1N 5RH
Tel: 071 580 6018**



ENTERTAINMENT

Iguana Entertainment is an international video game development company, producing games on all major formats, including new CD based platforms. Due to expansion and continued growth we are seeking talented professionals to join our teams of in-house developers.

GAMES PROGRAMMERS

Must be fluent in either 6502, 68000 or Z80 assembly languages, preferably SNES/Mega Drive console work. Must show outstanding drive and self-motivation.

GRAPHIC ARTISTS

Experience in Dpaint series tools is required. Must be able to draw backgrounds, foregrounds and sprite based graphics. Original art and design work is preferred.

DESIGNERS

Must have experience in designing video games, preferably on console platforms. Must be highly creative, with a background as either a programmer or artist in the video game industry.

• DEVELOPERS OF AERO THE ACROBAT AND NBA JAM •
• EXCELLENT SALARIES AND ROYALTIES •
• HIGH PROFILE PROJECTS WITH TOP INTERNATIONAL PUBLISHERS •
• 486 PCs AND TOP DEVELOPMENT SYSTEMS •
• LARGE CHOICE OF PROJECTS TO WORK ON •

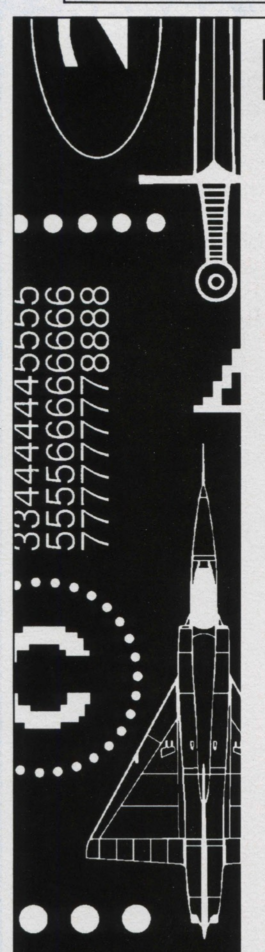
If you want to be part of a company that is here to stay, send you C.V.s and samples of work to:

Darren Falcus, Iguana Entertainment Ltd., Church House, Grange Road, Middlesbrough, Cleveland TS1 2LR

or call

(0642) 213633

All enquiries are in the strictest confidence.



Avon — Competitive salaries; £negotiable

MicroProse Ltd are the U.K. subsidiary of MicroProse Inc., Baltimore. We are currently undergoing a merger with Spectrum Holobyte, but already our corporate strategy is clear. With strong projects in the pipeline, and being part of an even larger company with financial backers in the corporate communications and film industries, the potential for increasing our market share across all entertainment software sectors is enormous . . . and already we are the market leader for the floppy sector.

Our direction as MicroProse Europe has shifted to a focus on the best-selling European platforms: A1200, CD32, SNES, Megadrive, and it is products for these machines for which we now require additional developers to join us. We are working on a number of conversions of U.S. PC products, but also on some original game concepts that are set to expand the MicroProse portfolio of products across many game genres.

GAMES DESIGNER

You'll need to be highly creative and able to communicate ideas clearly on paper and verbally. You'll have a good understanding of how computers and consoles work, an excellent knowledge of games across all formats, and an outline knowledge of how to write pseudo-code/algorithms. Our existing games designers are graduates, and this reflects the sort of educational background we would be looking for.

PRODUCER

Responsible for championing a project from "birth" to retail sale, the Producer plans, monitors and controls progress against time, cost and quality considerations. Candidates should have management experience (both projects and people) and be able to demonstrate the ability to persuade and influence others.

GRAPHIC ARTISTS

We would be particularly interested to hear from any artist with experience working with 3DS, or Alias software running on Silicon Graphics machines. Alternatively, if you have a strong portfolio of Amiga/ST artwork, get in touch now!

SOFTWARE ENGINEERS

Our change of direction has led to an immediate demand for Amiga/68000 assembly programmers, to work on the platforms mentioned above. If you have a track record of achievement, we are waiting to hear from you.

All positions are based in our modern offices just outside Bristol and the rewards will be related to abilities and performance alone. We have a significant bonus scheme in operation, a staff restaurant, social activities and company pension scheme.

If you are over 21, send your CV or introductory letter to me

Rob Groves, H.R. Manager, MicroProse Ltd., The Ridge, Chipping Sodbury BS17 6AY



Seriously fun software

Do you

want

to see **issue 5?**



Thursday 23rd December is the onsale date of **Edge** five. But you should know that it's not as easy as that. **Edge** sells out fast, so to make sure of your copy, fill in reservation coupon number 1, and hand it (or similar) to your newsagent, who will then reserve an issue of **Edge** for you every month.

Alternatively, fill in coupon number 2 (or a photocopy), put it in an envelope with some suitable finance, and send it to: **Edge, Future Publishing Ltd, Freepost, Somerton TA11 7BR**.

As a subscriber, not only do you get a free slipcase, worth £6, but you also receive two extra issues – 14 for the price of 12 – and a copy of **Edge** delivered to your door every month free of charge.

Still not convinced? All right then, fill in coupons 2 and 3: by subscribing using direct debit, you gain yourself another £4 saving – that's £48's worth of kit for just £32: 14 issues of **Edge** plus free delivery plus an ultra-smart **Edge** slipcase.

So don't be dim: reserve your issue or subscribe. But don't just stroll into your newsagent on Thursday 23rd December with the vague notion of purchasing **Edge** five. There may not be enough to go round...

1 Reservation coupon

To the newsagent: please reserve for me a copy of **Edge** five – onsale **Thursday 23rd December.** **Edge**, published by Future Publishing, is available from your local wholesaler.

Name ______________________

____

Address ______________________

____

____

____

Postcode ______________________

2 EDGE subscription order

Edge SC/0194

☐ I want to subscribe to **Edge**, and receive 14 issues for the price of 12

☐ **£36** UK[1] ☐ **£32** UK direct debit[1]

[1]Includes **free slipcase worth £6**

☐ **£63** Europe ☐ **£92** Japan, US & rest of world[2]

Six month's subscription

☐ **£18** UK ☐ **£42** Europe

☐ **£60** Japan, US & rest of world[2]

[2]Overseas subs are sent by Airmail

I'm going to pay by:

☐ Cheque (payable to Future Publishing Ltd)

☐ Direct debit

☐ Access ☐ Visa

Card expiry date ______

EC customers registered for VAT quote your number when ordering

______

Credit card number

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name ______

Address ______

______

______

______

Postcode ______

Telephone number ______

☐ Tick here if you are willing to take part in **Edge** research

Note: if you are planning to subscribe by direct debit, do not forget to fill in the direct debit form on this page, and send it to us along with your subscription form. We will then send the direct debit form to your bank to arrange for payment.

EDGE direct debit form

Fill in the direct debit form *and* the subscription form if you wish to subscribe to **Edge** and pay directly from your bank account. Paying by direct debit saves you £4 from the price of an annual subscription – that means you get the next 14 issues together with a free slipcase for only £32. If you wish to pay by cheque or credit card, just fill in the form above.

3 EDGE Direct debit form Originator's ID:930763

This form instructs your bank or building society to make payments direct from your account. Please complete all five items and send it to us as directed.

(Banks and building societies may refuse to accept instructions to pay direct debits from some types of accounts)

1. Full address of your branch

To: The Manager

.... Bank/Building Society

....

....

....

2. Account number: ☐☐☐☐☐☐☐☐

3. Sort code: ☐☐ ☐☐ ☐☐

4. Account in name of:

______

Instructions to bank/building society:

I instruct you to pay direct debits from my account at the request of Future Publishing Ltd

The amounts are variable and may be debited on various dates. I understand that Future Publishing Ltd may change the amounts and dates only after giving me prior notice

I will inform you in writing if I wish to cancel this instruction

I understand that if any direct debit is paid which breaks the terms of this instruction, you will make a refund

5. Signed ______

Date ______

viewpoint

What's your **opinion**? **Write** and **tell** us: **Edge** letters, 30 Monmouth Street, Bath, Avon, BA1 2BW



Congratulations on producing an excellent magazine. I found myself reading issue two over and over again. Very rare for me!

I own a Philips CD-i system and it's good to find a mag that covers this. But it's about time that someone spoke about the great CD-i Public Rip-Off.

I bought my CD-i in Jan '93 After reading and believing all the promising Philips literature. The Spring '93 catalogue listed a huge list of 'soon to be released discs – Spring '93 releases' including *The Mystery Of Kether, Mindquest, The Uninvited, Déja Vu, Eye Of The Earth, The Secret Name Of Ra*… Not one single disc as promised has yet been released.

I could have saved myself £400 and bought a Game Boy. The only decent disc that's been released is *International Tennis*, but even this is completely different from the one described in the Philips catalogue, eg, there's no action replay, the players have no victory gestures, and no press book to record professional income, etc.

It's obvious that CD-i was a year away from being ready for a decent launch. So what did they do? They make up a load of release dates for discs that could never be ready in time, and thousands of mugs like myself spent over £500 on a machine with nothing but a load of crap software to back it up.

I just hope the FMV cartridge will make up for all this, or do you think I should just sell up and buy a 3DO?

A McKettrick, Runcorn

Publisher's release dates are notoriously unreliable, but to miss them by a whole year is bordering on the inept.

Still, with games like *Inca, Kether, The 7th Guest, Voyeur, Microcosm, The Joy Of Sex* and the system's saviour, Digital Video, appearing over the coming months, CD-i owners can finally begin to feel that their purchase has been justified. At last.

Before you sell up and buy a 3DO, let's see what CD-i 2 has to offer…




With up-and-coming new titles like *The 7th Guest* (left) and *Kether* (right), owners of Philips' CD-i system now have several good reasons to stop feeling ripped off (See letter from A McKettrick)

Great mag, but I suspect you already know that – the style is good and the content is excellent. Well done.

After owning many computers since 1981 – yep, even a ZX81 – I suddenly got fed up with the whole videogame business earlier this year (not long after buying an A1200) and sold everything. I planned to take a year off.

But then Commodore did the dirty by releasing the CD³² which promised full-motion video. I am also into video, so it seemed perfect – but hold on… The first FMV films will work only on the CD-i? Nothing against the CD-i, but what happened to the universal format that everyone was talking about? Is this the way of the future, or have we been conned?

Finally, is it possible to have a multiformat CD? – and have you considered a monthly coverdisc? Even if the price went up, it would still be a really great buy each month.

M Hillerby, County Durham

It is true that the first CD-i films will be incompatible with other FMV-capable machines, but the reason is that Philips have signed a licensing deal for CD-i's FMV standard, not for the Digital Video standard – although the two are effectively the same.

Obviously the Philips machine is the only one available to do the job at the moment. But once other Digital Video devices are on sale, it shouldn't be long before it becomes a true standard, with DV-branded films on disc working on all MPEG Digital Video players.

A multiformat CD is possible but Edge won't be covermounting one for the foreseeable future. And by then, CDs might be a thing of the past…



Philips' CD-i system can now play Digital Video movies, like Top Gun – but they aren't Digital Video standard (See question from M Hillerby)

Firstly I would like to congratulate you on a most sophisticated magazine. I'm glad you have created a multiformat magazine that does not just tell you all about the new releases on SNES and Mega Drive, but tells you the best sound system, and the latest news on the CD picture.

I would like to mention the number of adult readers that wrote in thinking that this was their mag. Well It's not. It's equally for kids – just because it's in a smart plastic bag doesn't mean teenagers aren't allowed to read it.

Greg Beveridge (14), Wick

Well, to be honest **Edge** is aimed more at adults than kids, only because young gamers have about 20 titles to choose from: adults don't have any. But if **Edge** appeals to everyone, then that's fine by us.

Having read the first two issues of your **Edge** magazine I feel that companies such as Atari have been unfairly slagged off – particularly over its impending Jaguar console. And issue one took great delight in talking about the demise of the ST and the Falcon due to the decline in sales of games software, putting the blame on Atari.

This is unfair when the blame really ought to be heaped squarely on the shoulders of the software houses, because:

1. Some of them will not even sign for a development machine (in the case of the Falcon)

2. They can't be bothered to write games that take full advantage of the Falcon's hardware capabilities, when in previous years many of them have criticised Atari for not putting enough custom chips in the hardware.

3. Most games are sloppy and half-hearted efforts, and buyers are still expected to shell out £30+ on them.

S D Ollett, Brighouse, W Yorks

The success of hardware rests entirely with the manufacturers. Nintendo and Sega have achieved their successes by pushing the machines with intensive marketing campaigns, and having the best possible software ready at launch – most of which was developed in-house. And then by solidly supporting the machine throughout its life.

The ST was rushed and underspecced. Then when the Amiga took hold, Atari upgraded the ST. And then upgraded it again. And again. So ST users had to continually shell out for double-sided drives or memory upgrades, or even new machines, leaving software houses the tricky decision of which standard to write for.

The Falcon received no advertising outside the specialist press, and was launched – in paltry amounts – with little or no decent software.

You can hardly blame software houses for not supporting a machine that has sold so few units. After all, would you spend thousands developing a game that had no chance of recouping its development costs?

If Atari successfully launch and promote the 64bit Jaguar console (as it deserves), **Edge** will be the first to praise their efforts.



Atari's Jaguar will make or break the aged videogame giant. But has Edge been unfair in its treatment of them? (See letter from S D Ollett)



Ocean's *TFX* has a high frame rate, keeping the action smooth and believable. Unlike...

... *Race Drivin'*, which is slow, jerky and thus unresponsive. (See letter from Nathan White)

With regard to your reply in **Edge** two about how frame rates can affect software, I must first correct you on something – European PAL televisions, like PAL monitors, run at 50Hz, not at 25Hz as you stated in your reply.

With this out of the way, I believe you missed the whole point of my letter, Disney animations may look impressive at 25 frames per second, but computer games are something entirely different – they require a high frame rate not just to look impressive, but to allow the player more time to respond.

And by saying that frame rates are 'horses for courses', I presume you mean that some people are only satisfied with a high frame rate – this isn't the case. I'm quite happy to play a vector simulation at 15fps, but, like everyone else, I would rather play one at 50fps. Just in the same way that I would prefer a playable game with good graphics to a playable game with bad graphics. Frame rates aren't a specialised thing you know.

Nathan White, Walsall

Okay, Edge confesses to having made something of a hash of that reply. UK PAL TVs do refresh at 50Hz but they are interlaced, so effectively you get only one complete picture every $\frac{1}{25}$th of a second, which is where the confusion occurs.

Your point about frame rates still stands. To clarify for other readers, a game that updates quickly is more responsive. Take a flight sim for example: as soon as you start pushing left or right on the stick, you see the effect and know almost instantly when to stop pushing. However, if the frame rate was really low – say one per second – you wouldn't see the result of your manoeuvre for another second at least. And during that time, you'd still be pushing on the stick. By the time you could see that you'd oversteered and corrected the manoeuvre, you would have already gone way too far. You can never quite tell where you plane is – the visual information is always a second behind the control information, so the higher the frame rate, the more instant the visual feedback.

However, most games aren't locked: they vary their frame rates depending what's happening onscreen, so the more detail, the slower the frame rate. Therefore it would be difficult – and probably misleading – to provide this information.

Continued next page

viewpoint


Should Edge be covering new releases for Commodore's CDTV 'Multimedia machine'? We don't think so (see letter from Kevin Kendal)

Now I must admit your magazine is very nice, but you have missed something. I own an A570 CD drive for my A500+, but you don't seem to do anything about the A570 or the Commodore CDTV Multimedia machine.

Those of us that own either of these machines are very hard done by, as we have to struggle to get new games and software programs for them.

Could you please try and put something in your magazine about them, or could you put me in touch with someone who could tell me where I could get games and programs.

Also, could you tell me what is going on with the CDTV, or am I and many others stuck with our machines and no games to play on them?

Kevin Kendal, Cheltenham

There are so few good CDTV games, that it's not really worth our while. And, to be honest, there aren't too many CDTV owners either. If anything mindblowing appeared on the machine, we'd be only too happy to cover it. However, with CD³² titles now starting to appear, this is by far the more interesting of the two machines. Now if only Commodore could actually send us one…

Love the mag, congratulations and that. But with that said I'd like to complain. The best part of your mag is longer articles, and these alone make it worth buying, but can you please tell me what is going on with the reviews pages?

I am a SNES owner, so I was interested to see that you had just two SNES games in the reviews section of **Edge** two, while the Mega Drive/Mega CD had eight or so reviews and previews. And as to the SNES reviews themselves – *Top Gear 2* and *Jurassic Park*. Both of these games got an average six out of ten, while you claim in the testscreen intro that '**Edge** picks out only a select few new videogames releases, the very best new titles'.

Six out of ten – hardly the very best SNES games. And what about the following; *Rock 'n' Roll Racing, Super Empire Strikes Back, Virtual Soccer, Syndicate, Might And Magic 2* and *FX Trax*?

Another point I'd like to make is why have a three page review of an FM Towns Marty game, when this machine doesn't even get mentioned on the front cover, and you yourselves say it's unlikely to have a future outside Japan? These pages could have been used to even the score for SNES reviews.

David Lammin, Aberdeen

Being specific to issue 2, *Jurassic Park* and *Top Gear 2* were the best SNES games we could find for that issue – and believe us, we looked very hard. The other games were either unavailable for preview/review or technically uninteresting, or both. And bear in mind that those reviews are written two or three weeks before the magazine actually goes onsale.

Also, **Edge** does not intend to provide blanket coverage of games for an individual format – there are plenty of review mags out there to do that job for us. We simply act as a showcase for the more unique titles that month. That's why we gave an FM Towns game three pages: where else would you get to see anything on the game? Likewise for *Crash 'n Burn* which got four pages last issue, and, to a lesser degree, *Cybermorph* in this issue (see page 68).

Congrats on producing the best magazine to go on sale for many, many years. It's a refreshing change to find an informative all-formats magazine which does not treat its readers like five-year-olds.

I was, as no doubt many people were, impressed by the Atari Jaguar's technical specifications. If this were the sole factor in determining sales, it would be a surefire winner. But, as we all know, it's not. In order for Jaguar to succeed, Atari must ensure that the software produced is of high enough quality – it should not rely on conversions from low grade home computer games.

Looking back at the release of the SNES, there was one game that sold more machines than any impressive technical specs ever did – and that was *Street Fighter II*. Atari must find its *Street Fighter II* for the Jaguar, or else, brilliant machine as it is, Jaguar may fade into obscurity and go 'the way of the Lynx'.

J C Taylor, Bolton





Cybermorph **will be bundled with Atari's Jaguar console, but is it a** ***Street Fighter II?*** **(See letter from J C Taylor)**

Exactly right. That is why **Edge** has been so critical of the first batch of Jaguar games. Dismal titles like *Trevor McFurr In Crescent Galaxy* shouldn't be released, and we've told Atari so. Hopefully, they will have listened.

Thankfully, *Cybermorph* – which will be bundled with the Jaguar (see page 58) – is bloody great.

The Philips CD-i **Competition**


Photograph: Peter Canning

One scrummy prize: a CD-i player, Digital Video cartridge, and seven great CD-i games – so who won them? Find out here…

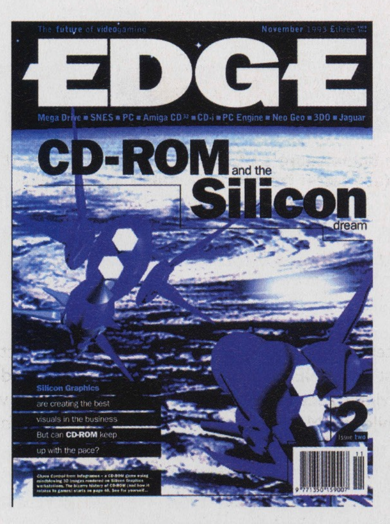
Edge two ran a competition offering one of the newly designed CD-i 210 players, complete with Digital Video cart and seven great games – *The Seventh Guest, Link: The Faces Of Evil, Kether, Zelda: The Wand Of Gamelon, International Tennis Open, Inca* and *Earth Command* – as first prize. We were bombarded with entries, but sadly there can only be one winner. And he is… **Jason Palmer** of Spalding, Lincolnshire. Nice one, Jase.

Back issues

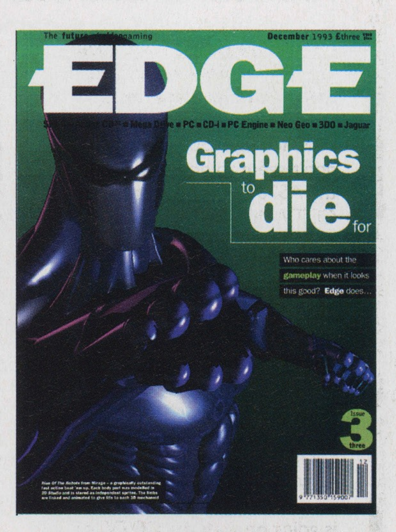
By popular demand, here's your chance to get hold of those elusive issues of **Edge** to complete the set



Edge one – 3DO: the real deal, Amiga CD32 launched, making of *Microcosm* plus videogames in Surround sound



Edge two – Atari's Jaguar console, the truth about CD-ROM, interactive TVs. All this plus sex and violence...



Edge three – First 3DO review, Virtual Reality, the Supergun home coin-op and 'Game Over' for videogame originality

Back issues coupon

Please send me the following issues of **Edge** (tick as required). Include payment of £5.00 per issue, or £8.00 for two.

☐ Issue one ☐ Issue two ☐ Issue three

Please send me ☐ **Edge** slipcase(s) at £6.00 each.

Name ______________________

____

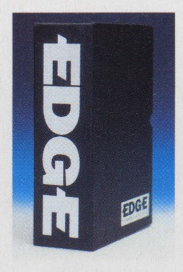
Address ______________________

____

____

____

Postcode ______________________



Edge is selling out fast, so if you missed one of our rare early issues, here's your chance to fill the holes in your collection. Each issue costs £5 – postage and packing are free – or you can cash in and get two back issues for a meagre £8.

And what better way to store these prestigious magazines than inside a custom-made and decidedly smart **Edge** slipcase? Another snip at £6.

To order your back issues or slipcases, simply fill in the form (left) and send it, together with the correct payment, to: **Edge Back Issues, Future Publishing, Somerton TA11 7BR.**

questiontime



Puzzled by so many emerging new videogaming technologies? Need some help with your games system? Then write to **Edge**...

Q Are there any plans to develop and release the following games on the 3DO? – *Dungeon Master I* and *II*, *Elite I* and *II*, *Street Fighter II*, *Mortal Kombat*, *Virtua Racing* and *Eye Of The Beholder*?

D Hayes, West Midlands

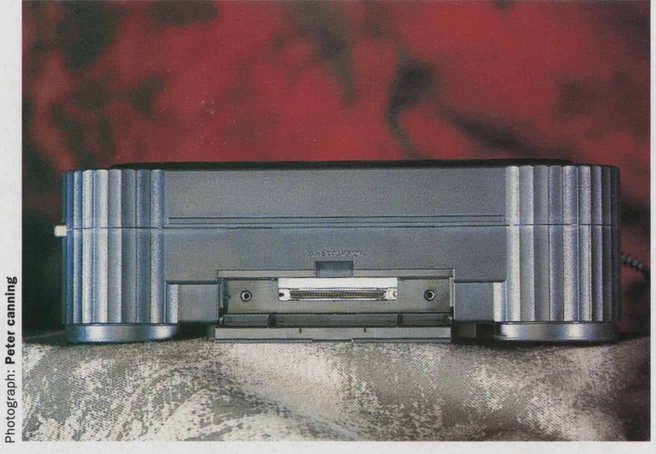
A The only realistic possibility is *Elite II* – author David Braben expressed an interest in 3DO as a platform for the game. As for *SFII* – or *Super SFII* more like – Capcom are rumoured to have acquired a 3DO licence although they haven't announced it yet.

Q I am intending to buy a 3DO next spring when it is released in this country. As I missed the first issue (which I understand covered the 3DO extensively), I don't know half as much about it as I'd like to. So, could you answer the following:
1. Will the 3DO have software available for word processing and art designing, as I read it has expansion ports for a keyboard and printer?
2. I understand that MPEG 1 comes onboard the machine as standard. What is the difference between MPEG 1 and MPEG 2?
3. I noticed only one 'Controller' port at the front of the Panasonic and Sanyo versions. What does Trip Hawkins intend to do with twoplayer games?
4. I assume the first machines will be of PAL standard in this country. Will these machines have separate Scart outputs (say from an RGB socket, as in the case of both the SNES and the Mega Drive?)
5. Do you intend to release back issues for mail order? I can't find any places or people who purchased **Edge** One?

Allan MacKenzie, W Yorkshire

A **1.** Possibly, but there's been no release date announced for either of these peripherals.
2. Actually, 3DO's hardware doesn't include MPEG 1 as standard – it'll be an optional extra in the form of a plug-in cartridge. The difference between MPEG 1 and MPEG 2 is lodged in the technical ability of each set of chips. While MPEG 1 can handle data rates of between 1 and 4Mbits/second, MPEG 2 can cope with higher rates – between 2 and 15Mbits/sec. Also, MPEG 1 is 'non-interlaced'. That is, it only codes a single 'field' on screen (ie half the number of lines in a single TV frame) and is therefore a 'sequential' system. MPEG 2 on the other hand, codes each 'field' separately, interlacing the display just as TV does. This, coupled with the higher number of bits in the data stream makes for a higher quality picture than with MPEG 1.
3. 3DO's controllers are daisychained. Up to eight of the things can be connected to one another through a port on the joypad itself. As for multiplayer software, that's very much up to the publishers.
4. The US machine doesn't have an RGB output because US TVs rarely have Scart sockets. It looks like Panasonic might release a specific PAL version of the 3DO because of the 50Hz refresh rate of standard UK TVs. This is a big problem for 3DO. Panasonic and Sanyo should seriously consider manufacturing a dual speed (50/60 Hz) version of the 3DO for the UK so that owners of modern 60Hz TVs (who, let's face it, will be the majority of purchasers of 3DO systems anyway), can get the best use of the machine. Who wants to fork out £500 for a system, and have to play the thing through a letterbox display?

But for this to work, and bearing in mind that US Genesis CDs don't run properly on the UK Mega CD (even with Datel's Pro CDX cartridge), speed synchronisation of software



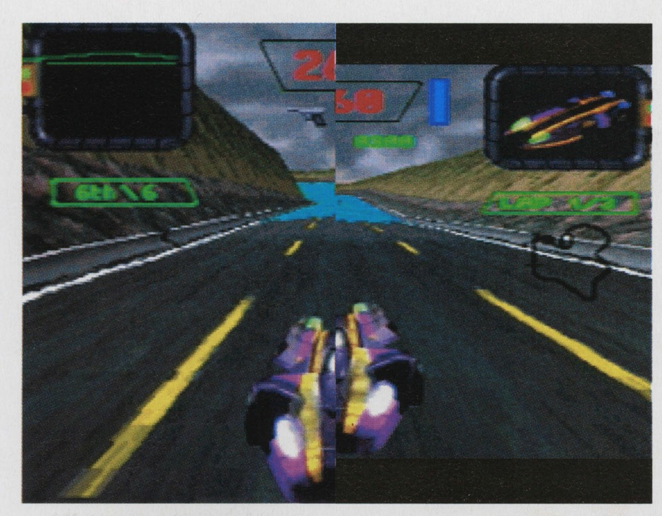
Photograph: Peter canning

The 3DO gives you the option of an MPEG 1 add-on. This slot is where the add-on will be fitted (see question from Allan MacKenzie)



Photograph: Peter canning

The 3DO joypad controller – the port on the front allows controllers to be daisychained together (see question from Allan MacKenzie)



Will Panasonic's UK 3DO give us a full screen PAL picture (left), or a converted NTSC picture (right)? (See question from Allan MacKenzie)

could be a problem. There's no point having a standard at all if the software from one country won't run on a games machine from another.

LaserDisc and VCR manufacturers include NTSC playback options. Let's just hope 3DO manufacturers can get round to doing the same...

5. Yes, back issues of **Edge** can now be bought for £5 an issue. Just turn to page 95 for more details on how to order issues one to three.

Q I have two quick questions about the forthcoming Atari Jaguar, and one general technical query.
1. What is the difference between bits and bytes?
2. Can the Jaguar handle FMV games, as it only uses cartridges?
3. I know the Jaguar is only 64bit and that the Pioneer machine can use LaserDiscs, but are there any companies planning to produce a 64bit LaserDisc machine?

Daniel Wood,
Berkshire

A **1.** A bit is a 1 or a 0. And there are a total of eight bits in a byte.
2. Software compression on the cartridges (Jag-peg) should enable some fancy attempts, but don't expect it to extend beyond the occasional intro. FMV is incredibly memory hungry and essentially a stablemate of CD and LD technology.
3. Possibly, but LaserDisc isn't a format that's being taken seriously in games.

Q Please explain the Atari Jaguar's '64bit RISC-based processing architecture' when the CPU is a MC68000 as used in the Amiga 500 and the Sega Mega Drive.

Stuart Wetherell,
North Yorkshire

A Okay, here goes. The Jaguar's hardware only uses a 16bit 68000 as a general purpose control processor – the other four processors in the machine are all 64bit-based. In the Amiga and Mega Drive, on the other hand, the 68000 carries out the bulk of the processing, despite the support of graphics and sound chips. 3DO's hardware uses a 32bit 68000 in the same way as the Jaguar – to oversee the control of all the other custom processor chips.

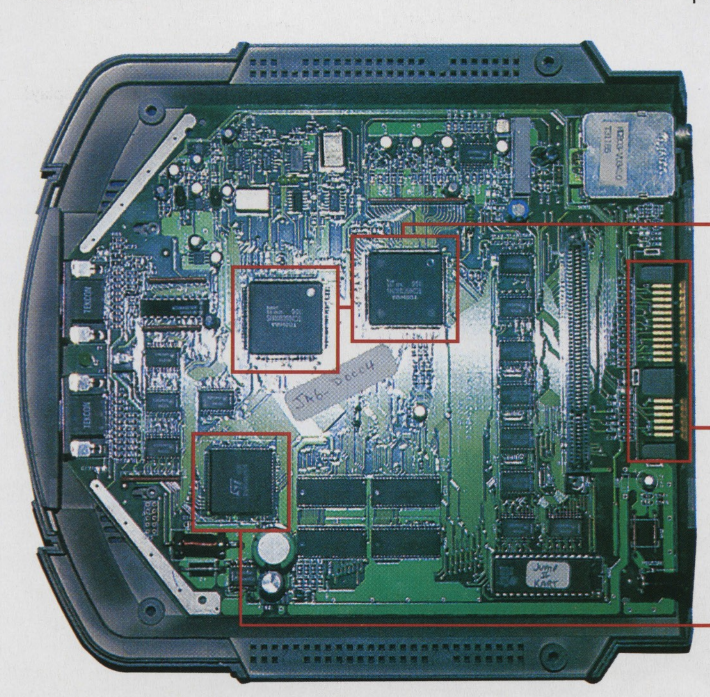
Q Sorry to dig up this thorny old topic again, but I'm confused about frame rates in games. Take Team 17's *Overdrive* for example. On the box it claims that the game scrolls at 50Hz (ie at 50 frames per second). Is this the fastest we're ever going to see a racing game scroll? And as a point of comparison, what frame rate would a game like *Sonic* run at?

Chris,
Noaddressville

A Answering your first question, no, but it's the *smoothest* you'll see the action on a PAL TV or monitor with a 50Hz refresh.

The frame rate only gives an impression of the smoothness of the action, and doesn't necessarily reflect the speed at which the screen moves. If a screen scrolls slowly and smoothly it's highly likely the update is occurring at every screen pixel. But when a screen really shifts, as in *Sonic* for example, it might only be updating every 10 pixels or so. The human eye can't detect the gaps if a screen's moving that fast. It simply won't make any difference to the action that you see onscreen.

As for the screen update in *Sonic*, it's still 50Hz on a UK Mega Drive. On a US or Japanese machine it runs at 60Hz, though, (ie 17% faster and with a full screen). Basically the only technical constraint on the speed of the scrolling in a game lies with the platform that it's running on.



The custom chips 'Tom and Jerry' lie at the heart of the Jaguar. 'Tom' contains the Atari-developed 64bit graphics processors and Jerry the 32bit digital sound processors

The Jaguar's expansion port is designed to handle future add-ons to the system, such as modem links, cable networks, a direct DSP (Digital Signal Processor) connection and TV I/O

The 16bit Motorola 68000, which is used as the general purpose controller inside the Jaguar. It's a similar chip to the one found in the ST, the Amiga and the Mega Drive

The Jaguar uses a 16bit 68000 chip as a general purpose control processor. It is coupled to four other main processors, which are all based on 64bit architecture (see question from Stuart Wetherell)

Q and A

Most gamers, at one time or another, have come across a technical problem that they can't solve, or a query with no-one to answer it. This is where Edge comes in...

Simply jot your problem down and send it to: Q&A, Edge, 30 Monmouth Street, Bath, Avon BA1 2BW. Alternatively, fax us on 0225 338236, or e-mail us via future@cix.compulink.co.uk. with a subject line of 'ATTN: Steve Jarratt'.

Edge will do all it can to provide a solution in the next issue of the magazine. Sorry, we can't answer queries on the phone and personal replies are not possible.

Next month



EDGE 5

Thursday 23th December

 continued Edge 5

EDGE


Future
PUBLISHING
Your guarantee of value